



NETWORKWORLD

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September 24, 2007 ■ Volume 24, Number 37



Nortel change-up

Nortel's new enterprise boss is expected to move fast on unified communications, multimedia applications. **Page 16.**

ITIL appeal

There's a payoff for streamlining IT processes, but also lots of headaches. Veterans share tips for success. **Page 22.**

Desperately seeking mobile security standards

Despite official urging, telecommuting within federal agencies is languishing, in part because standards don't exist for securing telecommuters. **Page 32.**

Opinion: Net Buzz

Ameritrade had plenty of red flags. **Page 50.**



Credit card security standard still shifting

BY ELLEN MESSMER

With some Payment Card Industry Data Security Standard deadlines less than a week away, credit card businesses are under the gun, some spending hundreds of thousands of dollars to prove compliance.

Even if they make it now, PCI compliance is a moving target with more requirements on the way for next year.

PCI DSS 1.1 is a set of 12 security requirements issued by the PCI Security Standards Council last year for protecting card data. Businesses must show PCI compliance by either Sept. 30 or Dec. 31 — depending on what they've been told to do by their banks — or face fines or higher rates levied by Visa, MasterCard and the banks pushing the standard.

Even as businesses struggle to make the grade, letting their networks and business processes be inspected by the 70 or so qualified security assessors (QSA) trained under the council's program for evaluating PCI compliance, additional security requirements are probable for next year.

At the PCI Security Standards Council 2007 Community Meeting held last week in

See PCI, page 20

salarysurvey2007

Salaries are up, but spirits sag over pay. **PAGE 38**

Hot IT skills. **PAGE 40**

Five tips for how to get more out of your job. **PAGE 42**

"THERE IS A WILLINGNESS TO SACRIFICE SOME POTENTIAL INCOME FOR THE ABILITY TO DO WHAT I LIKE. I WOULD SAY THAT'S PROBABLY ABOUT 10 TO 20%." — David Lampert, network operations manager, Physio-Control

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Our bloggers discuss Cisco and Microsoft technology training issues. www.nwdocfinder.com/1732 | www.nwdocfinder.com/1731

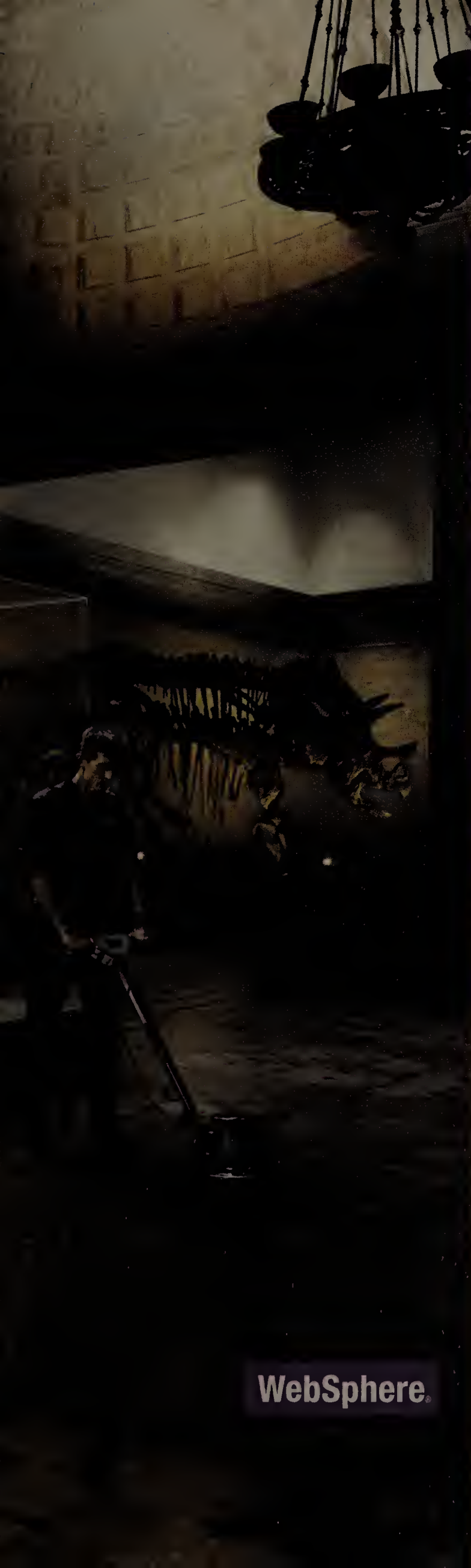
GOT QUESTIONS?

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_INFRASTRUCTURE LOG

_DAY 79: This is out of control! Our IT environment is rigid and inflexible. Our business needs are changing, but our environment isn't built to change with them. We can't adapt. Oh, no...I was afraid of this. We're so rigid we're stuck in time.

_Infrastructure *prehistoricus*. I've read about this.

_DAY 80: I'm taking back control with IBM SOA solutions. Now we can align business goals with our IT. We have the hardware, software and services we need to respond to change. Strategy, planning and implementation are in tune with our specific business needs. Now we can deploy and update business processes faster and more efficiently.

_Goodbye, rigid past. Hello, flexible future.

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■ **CONTACT** Network World, 118 Turnpike Road, Southborough, MA 01772; Phone: (508) 460-3333; E-mail: nwnnews@nww.com; ■ **REPRINTS:** (717) 399-1900; ■ **SUBSCRIPTIONS:** Phone (508) 490-6444; E-mail: nwcirc@nww.com; URL: www.subscribe.nw.com

GOODBADUGLY

Happy birthday, Smiley. ►

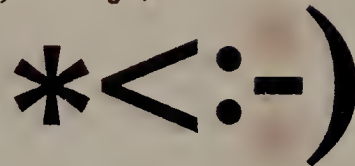
The smiley face emoticon (:-)) turned 25 years old last week.

Carnegie Mellon

University professor Scott

Fahlman claims to be the first to have used the smiley face in a message.

This marks the first time we've typed it into GBU.



Microsoft not only loser in this case? An industry group on

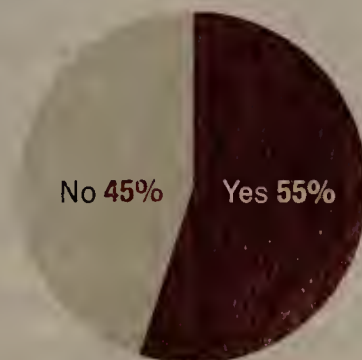
Microsoft's side said the European Union's second-highest court ruling last week that dismissed the company's appeal of the antitrust case was bad for small and midsize businesses. "[SMBs] and consumers will actually foot the bill. Microsoft did not win today, but it is European software developers and consumers that really lost," said Jonathan Zuck, president of the Association for Competitive Technology.

Fewer breaches, but worse. The number of reported security breaches is down, yet the average severity of breaches has doubled, according to a new study. The Computing Technology Industry Association (CompTIA) study, based on data collected from more than 1,000 IT professionals, revealed that 34% of organizations reported a major security breach in 2006, down from 38% in 2005 and 58% in 2004. Respondents, however, rated the average severity of breaches as 4.8 (with 10 being most severe), up from 2.3 to 2.6 in previous years.

POLL

A snapshot of how networkworld.com visitors voted on a key networking issue last week:

Have you, or will you be, hiring new IT staff in 2007?



Total respondents for this poll, all with hiring authority: **1,073**

SOURCE: NETWORK WORLD'S 2007 SALARY SURVEY

Vote and discuss: www.nwdocfinder.com/1724

Survey

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Why 802.11n won't replace cables any time soon

Re: Does 802.11n spell the 'end of Ethernet'? (www.nwdocfinder.com/1733):

One aspect not often discussed is the difficulty with configuring and managing the client devices. We all take Ethernet client connectivity for granted. Pick pretty much any system and hardware, and you can expect an Ethernet jack to work, and that's been the case for many years.

That's not the case with wireless LAN, and it's unlikely to

become the case any time soon. In the last six years we've gone from static [Wired Equivalent Privacy] to dynamic WEP/802.1X to [Lightweight Extensible Authentication Protocol] to [Wi-Fi Protected Access] to

WPA2 in terms of access control and encryption. For authentication we've argued about LEAP/[Microsoft's challenge-handshake authentication protocol], [Protected Extensible Authentication Protocol]v0, PEAPv1, [Tunnelled Transport Layer Security], and now we have PEAP-[Type-Length-Value], never mind all of the inner EAP types.

And all of this changes every year, making whatever you deployed last year a legacy system you now have to upgrade. When you can show me a client system (with a software supplant) that's stable and doesn't need replacement over a period of two years, I'll be more inclined to stop deploying wires everywhere.

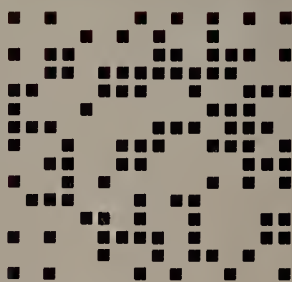
Right now, wireless is a supplement to wired networking that enables mobility, but the only reason its failings are tolerated in any large enterprise is because there is a wired jack nearby to fall back to.

Paul Dodd

Discuss at www.nwdocfinder.com/1734

► SPECIAL NETWORK WORLD FEATURE

SCAN THIS CODE with your cell phone to get the latest IT network news delivered to your cellular device.



To get the client software, use your phone browser to visit wap.connexto.com

For more information on code scanning see www.nww.com/codescan

A complex issue

Re: Complex event processing: still on the launch pad (www.nwdocfinder.com/1735):

CEP is an enabling technology — a computing paradigm. It will touch on all areas of computing, and end up as pervasive as database technology.

So I've no doubt that business-intelligence vendors will use CEP. So will algorithmic trading solutions, intrusion detection, fraud detection, [business-activity monitoring], etc. In fact, many solutions today already do.

Many of the vendors you listed have widely diverse solutions that in many cases don't compete with each other — that would be a bit like assuming that any vendor that uses a database must compete with every other vendor that also uses

a database.

So if CEP is still on the launch pad with regard to business-intelligence vendors, that's really a matter for business-intelligence vendors to understand how to use CEP technology. It is definitely not true for other solution areas — go check out CEP in Algorithmic Trading solutions. :-)

Brian Connell
CTO, WestGlobal

Discuss at www.nwdocfinder.com/1736

A reason to adopt IPv6

Re: One less reason to adopt IPv6? (www.nwdocfinder.com/1737):

Almost since IPv6's inception, the intention has been that there would be two configuration methods; stateless autoconfiguration and DHCPv6.

In many situations, stateless autoconfiguration is adequate. When additional configuration options are required or when an organization prefers stateful configuration, DHCPv6 can be employed.

These mechanisms are complementary and are in no way in conflict. Having two configuration mechanisms is in no way a "reason not to adopt IPv6", just as having a manual or automatic car is not a reason to not use cars!

Sadly, many of the supposed issues raised in the article are not issues at all, or are identical to the issues in IPv4.

David Holder

Discuss at www.nwdocfinder.com/1738

E-mail letters to jdix@nww.com or send them to John Dix, editor in chief, Network World, 118 Turnpike Road, Southborough, MA 01772. Please include phone number and address for verification

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_INFRASTRUCTURE LOG

_DAY 82: There are so many risks out there. Traffic spikes, natural disasters, mergers. How do we prepare? One in three companies don't recover from unplanned downtime.¹ Would we?

_Gil wrapped everything with bubble wrap. Just to be safe.

_DAY 83: I'm preparing with IBM Business Resilience Solutions. IBM Business Continuity Services help us assess our risks and design a proactive plan to deal with them. IBM Tivoli gives us the visibility to diagnose and fix infrastructure problems. And the robust availability features of the IBM System p™ give us maximum uptime.

_No more bubble wrap. And I have to mail a package. Great.



Tivoli.

Take the business continuity assessment at:
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BLOGOSPHERE

■ **Cisco snags Cognito.** Wireless industry icon Craig Mathias has launched a new blog on *Network World*. His thoughts on the Cisco purchase of Cognito: "Spectrum Expert is a PC-based hardware/software tool that can quickly identify what's going on in the 2.4 and 5GHz spectrum occupied by Wi-Fi, and it has saved my butt more times than I can remember . . . think about the possibilities here. While any Wi-Fi radio can see potential interference from other Wi-Fi devices, they can't see non-Wi-Fi traffic at all. That's where Cognio comes in — they build a spectrum-analyzer-on-a-chip called SAgE (Spectrum Analysis Engine), and just imagine how good a job we could do with in setting channel assignments and transmit power levels if we knew what else was happening in the air." www.nwdocfinder.com/1743

■ **Managing VMware infrastructure with Windows PowerShell (in the future).** Microsoft Subnet blogger Tyson Kopczynski: "A little birdie told me this today. Well, actually his name is Dmitry. Anyhow, I never thought that I would see the day. I know people have been managing VMware infrastructure with some custom PowerShell scripts. But, to think that there may soon be glorious cmdlets from which I can unleash the hounds of PowerShell automation upon VMware-based data centers. Well, I'm shocked. . . ." www.nwdocfinder.com/1744

■ **Cisco engineers with top-secret security clearances are available for hire.** Cisco Subnet blogger Brad Reese writes: "In the not too distant past, hiring managers contacted me regarding the availability of Cisco certified network engineers who possess highly coveted top secret security clearances." He offers a list of qualified top-secret engineers available for hire and links to where you might find the names of 219 more from 43 countries. www.nwdocfinder.com/1745

■ **New crimeware stats.** Deb Radcliff has got the latest word on bots, Trojans and denial-of-service attacks. These are the top three offenders in the world of cybercrime, she writes: "Secure Computing's Trends Report for August states that: Spam made up 89% of all e-mail. Trojan Horses made up 78% of all newly detected malicious code. Trojan horses are hidden malicious applications hidden inside downloadable executable files, such as iFrame and other types of animations. Ninety-seven percent of all malware came in the form of Windows Executables." www.nwdocfinder.com/1746

INTERVIEWS, THE COOLEST TOOLS AND MORE

ITvVIDEO

VIDEO INTERVIEW:

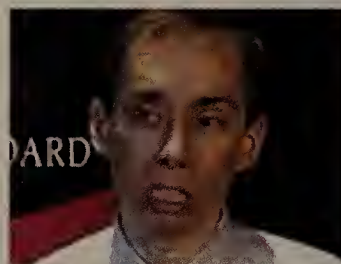


Speaking with Whitfield Diffie

Network World's Tim Greene talks with Whitfield Diffie, Sun Fellow, CSO and noted cryptographer, about open source in the enterprise, security and more.

www.nwdocfinder.com/1747

SECURITY BUZZ:

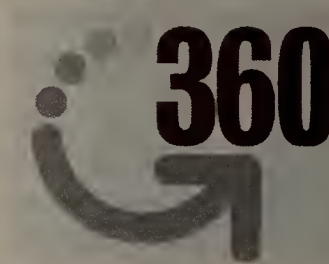


Experts Sound Off on Security

Speakers at the Security Standard conference weigh in on what they feel is today's biggest security threat. Featuring: Steve Hanna (Juniper), above, and Richard Palmer (Cisco).

www.nwdocfinder.com/1748

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BEST OF NW'S NEWSLETTERS

Scanning on port 80?

Wi-Fi guest-access strategies

Wide-area networking: A recent newsletter described what we referred to as the port 80 black hole. There is a growing number of applications, including peer-to-peer software such as Skype and AOL Instant Messenger, that use port 80 but most IT organizations don't have the ability to distinguish between the applications that use port 80. As a result, IT organizations are vulnerable to security breaches, cannot comply with government and industry regulations, are open to being charged with breaking copyright laws, and will struggle to manage the performance of key business-critical, time-sensitive applications. One response to that newsletter was from Jim Frey, vice president of marketing at NetScout Systems. Frey wrote: "As longstanding readers of your newsletter your Sept. 6, 2007, issue was of particular relevance. You pointed out a number of applications that hop their way through the network, very adeptly avoiding port 80 at times, other times they are simply 'hiding in plain sight!' There are also some complex applications that traverse port 80, like the Financial Information eXchange (FIX) protocol-based applications for electronic financial trading services." Frey went on to say: "One thought that hit us, as your conclusion discusses ways to handle AIM or Skype, is to determine your company's policy on

whether to block these services in your own network — but how do you know if you have these services in your network?" www.nwdocfinder.com/1740

Wireless in the enterprise: I mentioned last time some of the Wi-Fi mobility woes I experienced on a recent weeklong business trip. One in a series of snafus was the impossibility of getting on-the-fly guest Internet access at a client company I was visiting. The issue at hand is getting the temporary guest — be it a contractor, business partner or customer — sanctioned in the user database and issued a username and password. Generally, this requires planning ahead and involvement of the IT staff. Because IT staffers already have plenty to do, this takes time and certainly tempers a company's flexibility to accommodate drop-in colleagues. Some progress is being made. Wi-Fi systems maker Trapeze Networks recently launched SmartPass to hasten getting a guest signed up for wireless Internet access. The system has two levels of access: one for non-IT personnel, which is limited to creating a guest pass for someone that lasts a number of hours, days, or weeks. The other is for IT personnel, who have more granular control over user access, data, and records. www.nwdocfinder.com/1741

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COSTS

VS.

\$15.6M

CAPITAL
EQUIPMENT
COSTS

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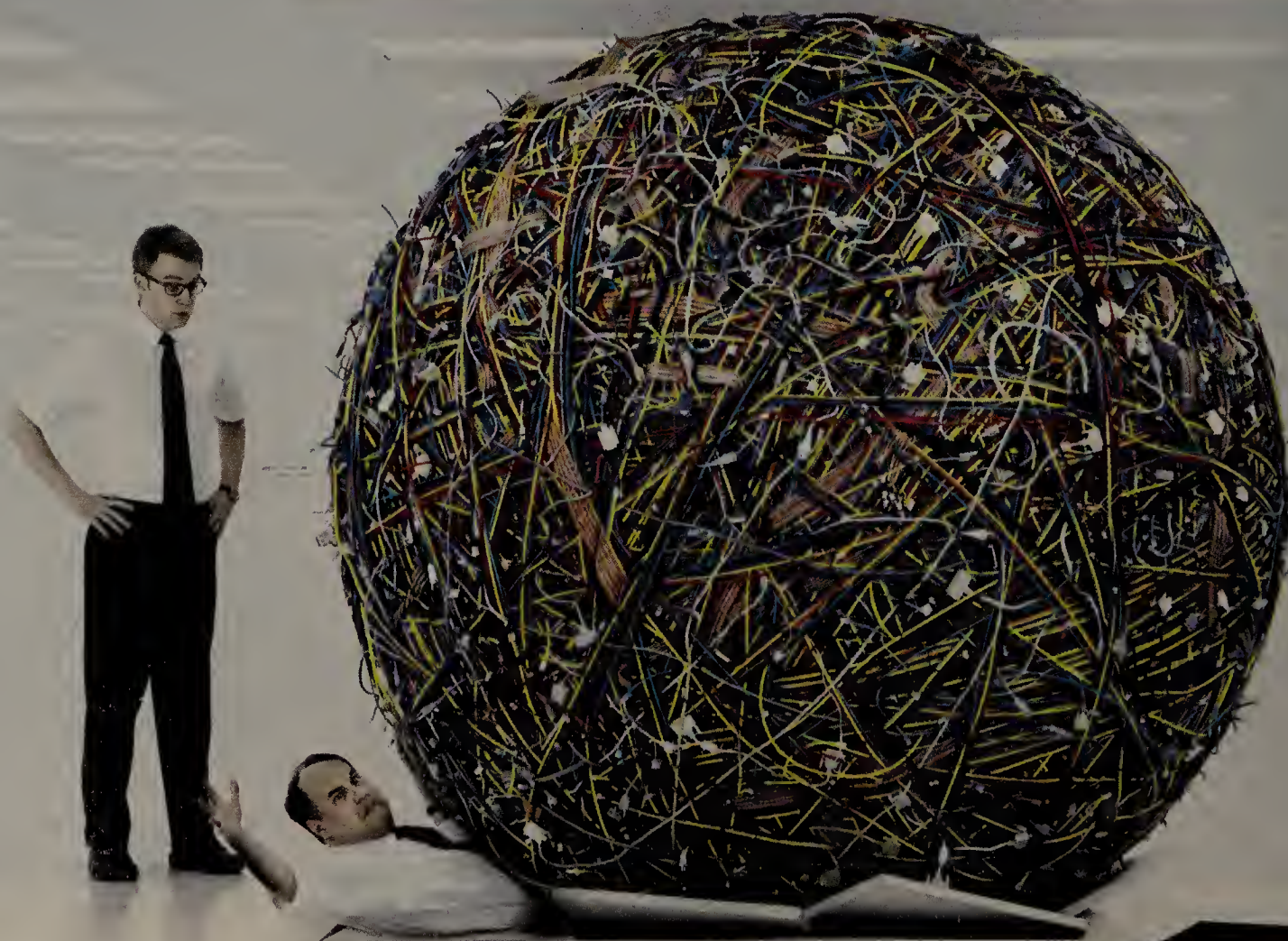
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_INFRASTRUCTURE LOG

_DAY 75: These cables are everywhere!! Connecting underutilized servers to more underutilized servers. Our energy usage is out of control!!

_DAY 77: I found a way out of this mess: the super-efficient IBM BladeCenter®. It helps us manage power and cooling usage with intelligent Cool Blue™ technology. And with its Dual-core Intel® Xeon® processor, we won't have to sacrifice performance for efficiency. So out with cables, in with blades.

_DAY 79: Gil's stuck under the ball. Tried calling his wife. Turns out the photo of his family came with the frame.



IBM.COM/OUTWITHCABLES

VMware bugs spotlight security

A set of newly discovered flaws in components of VMware's virtual-machine software has called attention to the security risks associated with running virtual computers on a single system. VMware has updated its products to fix the bugs, disclosed last week, but users who have not updated their software could face serious security risks because of a trio of flaws in the DHCP server that ships with VMware. The DHCP software is used to assign IP addresses to the different virtual machines running within VMware, but IBM researchers discovered it can be exploited to gain control of the computer. "By exploiting this vulnerability, you get complete control of any of the machines that are running on that virtual environment," said Tom Cross, an IBM researcher. www.nwdocfinder.com/1755

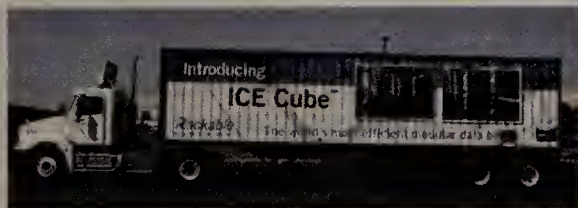
SCO admits survival uncertain. With its cash reserves running out and its legal case against IBM unraveling, the SCO Group now says there is doubt that it will remain afloat. SCO made the statement in its most recent quarterly U.S. Securities and Exchange Commission statement, filed last week. The company cited its recent motion for Chapter 11 bankruptcy protection, as well as a court setback relating to its intellectual-property claims, as reasons for worry. Last month a U.S. District Court judge ruled against SCO on several motions, finding that Novell, rather than SCO, owned the Unix copyright. Novell had sold SCO some Unix rights in the mid-1990s, but the court said that copyright was never assigned. "As a result of both the Court's August 10, 2007 ruling and the Company's entry into Chapter 11, there is substantial doubt about the Company's ability to continue as a growing concern," SCO said in the filing. www.nwdocfinder.com/1756

Sprint launches home cells to boost signals. Underdog mobile operator Sprint Nextel quietly rolled out an emerging technology last week to give customers a strong cellular signal and flat-rate calling at home. In parts of Denver and Indianapolis, Sprint began selling a femtocell, a small cellular base station that provides service specifically to a customer's home. The Sprint Airave, made by Samsung, costs \$49.99 and is designed for people to install in their own homes by plugging it into a broadband Internet connection. Then they can pay a flat monthly rate — \$15 for an individual and \$30 for a family — for unlimited local and nationwide long-distance calls while at home. The Airave works with any Sprint handset. When the subscriber leaves home, a call will shift over automatically to the outside cellular network. www.nwdocfinder.com/1757

Gartner: Open source impossible to avoid. You can try to avoid open source, but it's probably easier to get out of the IT business altogether. By 2011, at least 80% of com-

mercial software will contain significant amounts of open source code, according to Gartner. For enterprises, the important thing is to set guidelines on where and when open source products are to be used, said Gartner Analyst Mark Driver at the firm's Open Source Summit in Las Vegas last week. IT shops are scrambling to set open source policies, but almost no one has implemented one with any teeth, he said. It's better to avoid open source altogether than not to supervise its adoption, according to Driver. www.nwdocfinder.com/1758

Rackable gives portable data center a spin. Rackable Systems unveiled its answer to Sun's Project Blackbox, a shipping container full of computer equipment ready to power up as a portable data center. Rackable parked its product, ICE Cube, across the street from the Moscone Center in San



Francisco, the site of last week's Intel Developer Forum, and gave tours. Both ICE Cube and Blackbox cram servers, storage and related equipment into a shipping container that can be brought to a site, plugged in and started up. Hardware is stacked up on both sides of the container with a narrow hallway down the middle for technicians to maintain the equipment. ICE is an acronym for Integrated Concentro Environment. www.nwdocfinder.com/1759

Cybercrime up, software vulnerabilities down. The number of software vulnerabilities recorded in the first half of this year declined, while the use of cybercrime toolkits accelerated, according to separate IBM and Symantec risk-assessment reports. IBM's ISS division provided its semiannual count of the

number of new software vulnerabilities — which decreased 3.3% to 3,273 compared with the same period last year — and Symantec updated its biannual Internet Security Threat Report. According to the ISS report, attackers are concentrating on Web-based exploits that take advantage of critical vulnerabilities, including 16 vulnerabilities that required patching in Internet Explorer and 22 vulnerabilities in the Firefox browser found during the first half of 2007. Symantec notes in its report that cybercrime is increasingly professionalized, because of the rise of cybercrime toolkits, such as MPack. www.nwdocfinder.com/1760

Spotlight CISCO BUYOUTS

The risky business of acquisitions. Cisco has made 16 acquisitions in the past two years, and statistically speaking, it's likely one to four of them will fail. "Approximately a quarter of our acquisitions don't work," Cisco's Senior Vice President Howard Charney told attendees at the company's Networkers show in Australia last week. Charney didn't name specific companies, but added that even the failed acquisitions were still beneficial because they delivered new intellectual property, staff and users to Cisco. The company's most notable acquisition-strategy failure involved optical networking; problems in that technology area surfaced soon after Cisco's purchase of Monterey Networks in 1999. www.nwdocfinder.com/1753

Cisco to acquire Cognio. Cisco last week said it will purchase privately held Cognio, a maker of spectrum-analysis and management systems for wireless networks. Terms of the acquisition were not disclosed. Cognio develops products to detect and mitigate sources of radio frequency interference in corporate wireless networks. Reduced interference translates to better performance for mobile applications, Cisco says. The Cognio acquisition is expected to close in the first quarter of Cisco's 2008 fiscal year, which began last month. The deal will be acquisition No. 122 for Cisco. www.nwdocfinder.com/1754

Event to showcase cutting edge

BY JON BRODKIN

Network executives looking for new and innovative enterprise IT products will encounter food for thought at DEMOfall07 (www.nwdocfinder.com/1278), a launch pad event for emerging technology that kicks off Monday, Sept. 24.

Here's a quick look at some of the products that will be unveiled.

Ever wish you could fix a smart phone for

a user who's out of the office? LogMeln (www.nwdocfinder.com/1279), which launched two years ago to provide remote access to PCs, is introducing a product that lets IT support technicians see and access the user's smart phone from their own computer screens.

LogMeln Rescue + Mobile works like this: A support technician directs the device owner to www.rescuemobile.com, where a small applet is downloaded to the mobile device and the user is given a connection code that securely links the technician to the phone.

Technicians can manipulate a phone's keypad as if they were holding it in their hands, letting them fix bugs, update software, configure settings or train users.

The mobile service supports smart phones running the Microsoft Windows Mobile operating system. Later versions will support the Symbian and BlackBerry operating systems, according to LogMeln.

Another DEMO announcement aims at making geospatial information on municipalities more accurate and available in higher resolution. Earthmine says it is using new technology to map every road, alley and freeway in municipalities, and provide tools for viewing and using spatial data.

Earthmine says current sources of spatial information for urban environments are often out-of-date or of poor resolution. The vendor says its technology will assist complex decision making in government and commercial enterprises.

"Earthmine just might be the key to making the promise of the GeoWeb a reality," says DEMO Executive Producer Chris Shipley in a press release. "With its unique ability to put complex geospatial data in a context that anyone can understand, Earthmine is enabling a whole new generation of mapping applications."

Earthmine's technology, which it calls "reality indexing," integrates hardware, software and workflow programs to deliver street-level geospatial data through a Web interface. High-resolution panoramic images in three dimensions can be collected for entire metropolitan areas by teams of drivers within weeks.

Earthmine expects to begin beta testing by

year-end. The company plans to target cities and enterprises with heavy reliance on GIS that need to analyze information related to urban environments.

In more DEMO news, e-mail collaboration and data integration are being targeted by a product announced by Prolify.

Prolify is unveiling an add-on to Microsoft Outlook that lets information workers collaborate and manage

all their tasks within e-mail, and gives managers real-time status updates for projects. With a data integration bridge, Prolify connects e-mail to CRM, ERP and other applications, removing the need for manual updates and information retrieval.

"Prolify enhances e-mail so it works properly as a collaboration tool, giving people the freedom to easily work together and interact with a range of applications right from their desktop or mobile e-mail," Prolify says. "Prolify enables users to assign, coordinate and track everything from ad hoc activities to multidepartment projects right from Microsoft Office Outlook."

The system aims to improve management of assignments by providing visibility into work status and delays, analysis tools for activities and projects, and an audit trail of all written communication for each project.

Reducing the cost of the enterprise WAN is the focus of Talari Networks, a DEMO presenter that's been in stealth mode. Talari's Adaptive Private Networking is an appliance deployed at data centers and remote locations, letting customers combine broadband circuits from different providers or augment traditional WAN services with broadband circuits. Talari says its product will reduce WAN service cost by at least 40% while offering greater reliability than existing solutions.

Among other benefits, Talari could help a global company give work teams access to high-quality videoconferencing services, improving collaboration, Shipley says.

"Talari's solution shifts the economics of enterprise communications by orders of mag-

nitude. Reducing operating expenses by hundreds of thousands of dollars while maintaining and improving performance and reliability has a huge impact in and of itself," Shipley says. ■

InBrief

3Com investor charged in bomb threats

An individual investor in 3Com was charged last week by federal authorities with threatening to bomb investment firms if they did not boost the company's stock. John Tompkins of Dubuque, Iowa, was charged with 15 counts, including securities fraud, intent to extort, possession of an unregistered destructive device and using a destructive device while committing a violent crime. Tompkins, a machinist, was arrested in April and accused of sending threatening letters and bombs to investment firms under the guise of "The Bishop." Tompkins could face life in prison if convicted on the charge of using a destructive device while committing a violent crime.

Internet pipes holding up

Despite more people dishing up video and other bandwidth-saturating content, Internet traffic growth rates are slowing down, according to a new Web site at the University of Minnesota. The Minnesota Internet Traffic Studies site shows that Internet traffic growth rates have settled in at about 50% to 60% in the United States and worldwide as the Internet matures. That's a far cry from the doubling rates every year or even every 100 days that some claimed in the mid-to-late 1990s.

Sun nixes federal contract

Sun canceled one of its largest contracts with one of the country's largest IT buyers, the federal government. The company, which is embroiled with the General Services Administration's Inspector General over pricing policies, said it would cancel its Multiple Award Schedule effective Oct. 12. Sun will continue to do business with the federal government without an MAS contract. Sun has been the subject of an Inspector General's investigation into its product pricing policies, which revealed the government had been overcharged by Sun for \$25 million and failed to receive discounts Sun gave to its largest customers.

DEMOfall07

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ONLINE: More from Demo

For more coverage of the 70 announcements at DEMOfall07, check out

www.demo.com

Take a look at some of the products to be unveiled at the show:

www.nwdocfinder.com/1752

No price hike for SQL Server 2008

BY JOHN FONTANA

DENVER — On top of new features in the next version of SQL Server 2008, the most alluring attribute should be that the database's price will not change, according to Microsoft.

The latter news came from Ted Kummert, corporate vice president for the data and storage platform at Microsoft, and drew rousing applause from about 2,000 SQL Server users gathered at their annual Professional Association

for SQL Server (PASS) Summit.

The per-processor retail pricing of SQL Server 2005 is \$24,999.

Kummert had little other news to share but used his time to lay out the foundational elements of SQL Server 2008, slated to ship between April and June 30, 2008.

It was Kummert's first chance to talk to the PASS customer base since coming to Microsoft's database business unit in January.

He used a series of demos to whip up excitement around SQL

Server 2008 even as more than half of the database's users have yet to migrate to the 2005 version, which Microsoft considers the migration steppingstone to SQL Server 2008.

"I am here to see what [SQL Server] 2008 does and what it means to move the database beyond relational data," says Johan Bijnen, system engineer for steel-manufacturing giant Arcelor Mittal, based in Belgium. Bijnen says his division is nearly 10% into a roll-

out of SQL Server 2005. "Once we get the first feedback after 2008 ships, then we will start a real evaluation," he says. But the plan is not to skip 2005.

With 2008 in beta, the attendees were at PASS to evaluate, and Kummert said he would do that via demos.

"We're going to spend some time letting the code speak about where we are headed specifically with SQL Server 2008," Kummert

See Microsoft, page 47



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More change ahead for Network General users

BY DENISE DUBIE

Network General customers could face another upheaval, as the company will change hands for the third time in 10 years when NetScout Systems completes its \$205 million acquisition of the Sniffer technology creator.

The acquisition, expected to close in November, would combine Network General's expertise in managing networks, applications and servers from the bottom up with NetScout's top-down approach to real-time network and application-performance monitoring and management, NetScout officials say. Industry watchers agree the acquisition could give customers more comprehensive network and application performance-management capabilities.

"Network General's acquisition of Fidelia last February gives them the application-performance story that NetScout was not covering," says Tracy Corbo, senior analyst for IDC. "These companies have found themselves more often in cooperative selling environments because each was approaching the problem differently."

Network General, founded in 1986, established itself with its Sniffer packet-analysis technology and found itself pigeonholed in customers' minds. Today the vendor has more than 4,000 customers, who in the past 10 years have seen Network General acquired by McAfee, sold by Network Associates (which now is McAfee again) and now most likely picked up by NetScout. Despite customer loyalty to a technology staple such as Sniffer, industry

watchers say Network General customers could become alienated without proper support from NetScout.

"My concern is over the fact that the Network General customers had to go through a previous acquisition and now must go through yet another," Corbo says. "If NetScout wants to double its revenue base, they will need to work very hard to shore up that base and provide them a very visible level of customer support to allay any concerns they may have regarding ongoing product support."

NetScout says it intends to support all Network General products, take on all employees and maintain operations at the Network General location in San Jose, in addition to NetScout's Westford, Mass., headquarters. ■

IT grapples with heat, overcrowding

EPA gets serious about reducing power and cooling loads in data centers

BY DENI CONNOR

DALLAS — These days Andrew Fanara isn't worrying about the massive amounts of electricity a big-screen TV consumes; he's thinking about how electrical consumption in the data center is accelerating from the use of power-hungry servers and other network gear.

Fanara is program manager for the Environmental Protection Agency's Energy Star Program, which rates consumer appliances. He spoke last week at the AFCOM Data Center World conference (www.nwdocfinder.com/1750), where 850 IT professionals tuned in to hear Fanara talk about the government's efforts to promote energy efficiency in data centers.

Electricity is the lifeblood of a data center, Fanara said. "Ironically, it is the inefficient use of that energy that creates the challenges that many [data center managers] are facing in terms of running out of power, having to go build additional data centers, incurring that cost, not utilizing the IT assets as much as [they] probably would like to," he said. "All of that creates significant challenges."

Several sources confirm enterprises are struggling with jam-packed data centers. A recent survey from storage vendor OnStor of 369 IT professionals found that 63% of organizations have run out of space, power or cooling capacity without warning. Further, at the current data-growth rate, 43% of respondents said they could stay in their present infrastructure for only six months to one year if they changed nothing.

Research from Gartner reports that 50% of current data centers by 2008 will have insufficient power and cooling capacity to meet the demands of high-density equipment.

At the AFCOM event, Fanara pinpointed the electricity-gulping x86-based server as the first target of the EPA's attention. "Volume servers are probably the largest consumers of energy. They are not the most efficient in terms of their energy use and thus are the biggest opportunities going forward," Fanara said.

To help spell out just how much power servers draw, the EPA plans to develop, as soon as year-end, Energy Star standards for servers that will let vendors test for energy efficiency and computing performance and brand their servers with Energy Star ratings, which were previously reserved for consumer appliances.

The EPA also will release recommendations for more efficient server power supplies. Between 1kWh and 1.5 kWh of power can be saved for every 1kWh saved at the plug, according to the EPA. The agency is working with a group called the Climate Savers Computing Initiative to develop power supplies that are 90% more efficient than earlier models and

Powering the data center

High energy consumption in the data center is creating challenges for IT managers. Here are some numbers to watch:

- Over the next five years, power failures and limits on power availability will halt data center operations at more than 90% of all companies, data center association AFCOM predicts.
- Between 8% and 10% of servers in data centers have no identifiable function, according to Sun.
- Most data centers already are well past the cooling capacity provided by raised floors, which is typically about 4kW to 6kW per rack, Sun reports. Racks above 12kW are probably blade-based and will require supplemental cooling.
- IT equipment consumes 50% of data center power, according to consulting firm EYP Mission Critical Facilities.

could reduce greenhouse gas emissions by 54 million tons per year, potentially saving more than \$5.5 billion in energy costs.

A test procedure has been developed by the Electric Power Research Institute (EPRI), a non-profit energy and environmental research center, to verify power-supply efficiency, reliability and performance.

Looking ahead, Fanara said the industry needs a means to measure the energy consumption of servers, storage and other network gear that takes into account not only the capability of the product but also its real-world performance.

That's something the Standard Performance Evaluation Corp. (SPEC), an industry group that provides system-performance tests, is working on. "SPEC is creating a power and performance benchmark, the first of its type, which measures server performance in a real-world situation," Fanara said.

Real-world performance

Data center manager Jeff Allen also took the stage at Data Center World and talked about how energy consumption is limiting his ability to do his job.

Allen, technology operations center manager at Georgia State University in Atlanta, recounted how he was asked by the university to host new applications on his network. To do so required Allen to add a new UPS and deal with an electrical generator that was running at maximum capacity and a 5,500-square-foot data center that was maxed out on space and cooling.

"Our network operations center, before we began the upgrade, was basically operating on numerous battery-style UPSs," Allen said. "There was no standardization, no schedule for battery replacement and no maintenance con-

tracts on many of them."

To solve the problem, the university invested in an integrated UPS and DC power system that uses flywheel technology, which is an alternative to chemical batteries and provides power during disturbances until generator power kicks in.

Allen also installed racks that use 208V/30A power to lessen his energy costs. "By using the higher voltage 220 vs. 110 power, we are reducing loss of power through the wires, allowing the hardware to run more efficiently, because power loss has been reduced, which in turns makes us more energy efficient," he said.

Banishing energy parasites

Jack Pouchet, director of green initiatives for Emerson Network Power, told attendees there are some very simple, but often overlooked, ways to save on energy in the data center.

"Data center horror stories are amazing and would make great comic books," Pouchet said.

He cited typical enterprise errors. One is using perforated tiles on raised floors in a hot aisle, which allows cooled air to infiltrate. Others are failing to use blanking plates in racks where servers or other network gear don't exist, which lets hot air blow into cold aisles, and keeping the lights on 24/7 in a data center.

"We ball parked 250 to 300kW of energy savings we could get from the generator room, the lighting, the environmental for the security system, the fire suppression system — things that were superfluous or parasitic losses," Pouchet said.

"These parasitic losses are things that are not core to your operations, they don't support the servers, they don't keep them running, they don't keep them cool, they don't process data, they don't process storage." ■



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Q&A

New Nortel exec to reform enterprise



In an unexpected move, Nortel last week replaced its enterprise chief. After 20 years with Nortel, Enterprise Solutions President Steve Slattery is leaving the company Oct. 1. Taking over immediately, however, is Joel Hackney, Nortel's former senior vice president of Global Operations and Quality, and another of CEO Mike Zafirovski's colleagues from General Electric. Hackney, credited with driving many of Nortel's recent operational, supply chain, customer and business improvements, shared some thoughts with Network World Managing Editor Jim Duffy on the sudden switch, which comes while Enterprise Solutions is enjoying some solid momentum — although apparently, things aren't moving fast enough.

Enterprise Solutions grew 23% in the second quarter, its fourth consecutive quarter of year-over-year growth. Why the switch?

We just finished our strategy session, and we're pleased with the progress, but we think there's a lot more we can do. What we're focused on is accelerating the progress. It's all about accelerating the momentum that's in place.

What do you want to do differently?

Customers are looking for a real choice. Every time we become more visible in the marketplace — either through investments in go-to-market, on product innovations, or in partnerships and key alliances — the paybacks are coming back in a meaningful way. So what I want to do is really double down on the investments, focus on go-to-market and to continue the alliances that we've done in meaningful way with Microsoft, IBM and LG. And really focus on getting our message to the market much more broadly and aggressively.

Do you plan to rely more on partnerships and mergers and acquisitions, rather than internal development?

Partnerships are absolutely a critical piece of what we're doing. When we look at business process intersecting with communications in the enterprise space, it's clear one person can't solve it or bring all the solutions. So that's why we have made the major alliances like we have. We feel we can continue to grow this business and accelerate the growth

organically. So we are continuing to make those investments. But we are also very open in looking at opportunities inorganically. So it is a combination of both.

There's been a lot of speculation recently on Nortel's M&A strategy, and Steve Slattery even mentioned last week that Nortel has spent the last 18 months sizing up potential acquisition targets. Are you ready to pull the trigger?

I wish I could answer that question directly. I obviously can't speak to any specifics other than to say that the inorganic element of our growth plan is important, and we're focused on that element as much as we are the organic, but we need both.

Any specific product areas where you're looking for the inorganic contribution?

Customers need a real choice in data. Our strength in voice is well known and well documented. We're always looking at opportunities to build our capability for a direct relationship with key users while still partnering with channel partners. Anything specifically that does either or both of those is obviously attractive to us.

Top-line growth is accelerating, but what about the bottom line? Is Enterprise meeting profitability expectations?

It is improving. We really believe we can make this an anchor business, and for us an anchor business is a business that's growing faster than market and has double-digit operating margins. We think the opportunity

exists for this business, and that's where we're focused.

Was that a major impetus for this switch?

That was one element of it, but not the only element. The big element around it is, hey, we're just really excited about what's possible here and what we've done, and we want to accelerate it. But not just on the earnings line — all the way down the P&L. So you plan to increase investment while at the same time driving double-digit margins.

That implies not only top-line growth but cost-cutting as well. Are you looking at a product rationalization?

This is definitely not a restructuring story; this is a growth story. We'll always on a day-to-day basis as a normal part of business look at how we continue to tighten up our focus. But I would say that is the lesser part of the equation.

From a product perspective, what are your priorities?

Unified communications for us is a big push. Gartner recently positioned us in the leadership quadrant for unified communications, and Cisco as the challenger. We believe we have an advantage there. We're going to continue to invest heavily in that. The other area I would say is in multimedia applications in general. If you look at our call center/contact center/interactive-voice-response products and put them side-by-side with all the competitors, it is a very compelling value proposition that we want to continue. Lastly, the transition to [service-oriented architecture] is one that we're committed to and will continue to push.

How do you plan to accelerate your go-to-market strategy?

We've made significant investments on that in terms of increasing the number of feet on the street, or sales resources globally. What we'd like to do is see how we can even do more of that. So that's one element in terms of just how we expand our reach. Another element is, we'd like to increase our relationships with key global accounts — multibillion-dollar Fortune 100, 200 companies where we can strengthen the relationships we have today. So we've put in place a global account team focused on doing that while at the same time leveraging our channel partners. ■

THE SPYWARE PROBLEM IS BIGGER THAN YOU THINK

IN THE SPRING OF 2007, A MAJOR RETAILER REPORTED HACKERS HAD BROKEN INTO THEIR RETAIL OPERATIONS SYSTEMS, ACCESSING CREDIT & DEBIT CARD INFO FROM STORES AROUND THE U.S. AND PUERTO RICO. EXPERTS ESTIMATE THAT AS MANY AS 15.7 MILLION CREDIT & DEBIT CARDS HAVE BEEN STOLEN. OVER 18 MILLION IN RELATED FRAUD HAS BEEN REPORTED TO DATE AT \$10 TO REPLACE EACH CARD & \$180 TO HANDLE EACH CALL, IT'S EASY TO SEE HOW THIS BREACH IS GOING TO COST BILLIONS TO REMEDIATE AND THE UNBOLD COSTS TO THE BRAND HAVE YET TO BE SPEN

There is a better way to protect your company from spyware.

Spyware is more insidious and costly than viruses, because most of it goes undetected. One Fortune 100 retailer recently found 6900 undetected spyware programs, 586 Trojans and 21 keyloggers despite running freeware plus protection from a leading antivirus provider. You see, most antivirus providers toss in some average spyware protection (about 56% effective) with their product, and claim it's safe. Only Webroot® AntiSpyware Corporate Edition could find and remove the critical malware for this retailer.

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Immortal — and ubiquitous — digital bread crumbs

Records of your activities are growing, with few rules about who can see them



NET INSIDER
Scott Bradner

The *New York Times* discussed one effect of today's information-producing technology in a Sept. 15 article titled "Tell-all PCs and phones transforming divorce." It painted a grim picture — grim for the cheaters, anyway — of the records left lying around if someone cheats on a spouse. The article focused on cell phone records, saved e-mail messages and hacked accounts, but there are a lot more digital bread crumbs we leave behind, most of which probably will far outlive us.

The job seems to be getting easier for divorce lawyers, at least those not working for people with something to hide. New records are created every time a cheater makes a phone call, buys something with a credit card, sends an e-mail, surfs the Web, drives through an automated highway toll booth, enables an automobile GPS system, or even walks down the street with a cell phone in pocket or purse.

Most of these records are, for practical purposes, immortal. At the very least, most of the records will be there long enough to be useful to a spouse or lawyer wanting to find out just what is going on.

Of course, records are not kept just on people who cheat on their spouses. As Bill Gates, among others, knows too well, e-mail is forever. Vast databases are being built up about the activities of us all. Inexpensive disks mean it is less costly for data collectors to hang onto data than to think about whether they might have a use for it years from now. Decades from

now, an investigator may be able to find out that you bought whole rather than skim milk at the market last week. Some companies are beginning to pay lip service to the idea that data about the actions of individuals does not need to be immortal, but far too few are doing so.

There are almost no rules in the United States that control access to this building pile of information. The U.S. government has refused to take the same kind of principled approach to the topic that Europe has. One of the few U.S. laws in the area illustrates this perfectly: It is illegal under U.S. federal law to disclose videotape rental or purchase records improperly.

This law grew out of the disclosure of Robert Bork's videotape rentals during his Supreme Court confirmation hearings. Rather than require protection of all private records about individuals, however, Congress chose to address this one instance of the underlying problem rather than the problem itself.

So, pay cash and use pay phones if you plan to cheat. On the other hand, if you are one of the data collectors, why not think about what you need to know about your customers and how long you need to know it — not to protect cheaters but to delay a little bit the rush to government and universal "Total Information Awareness."

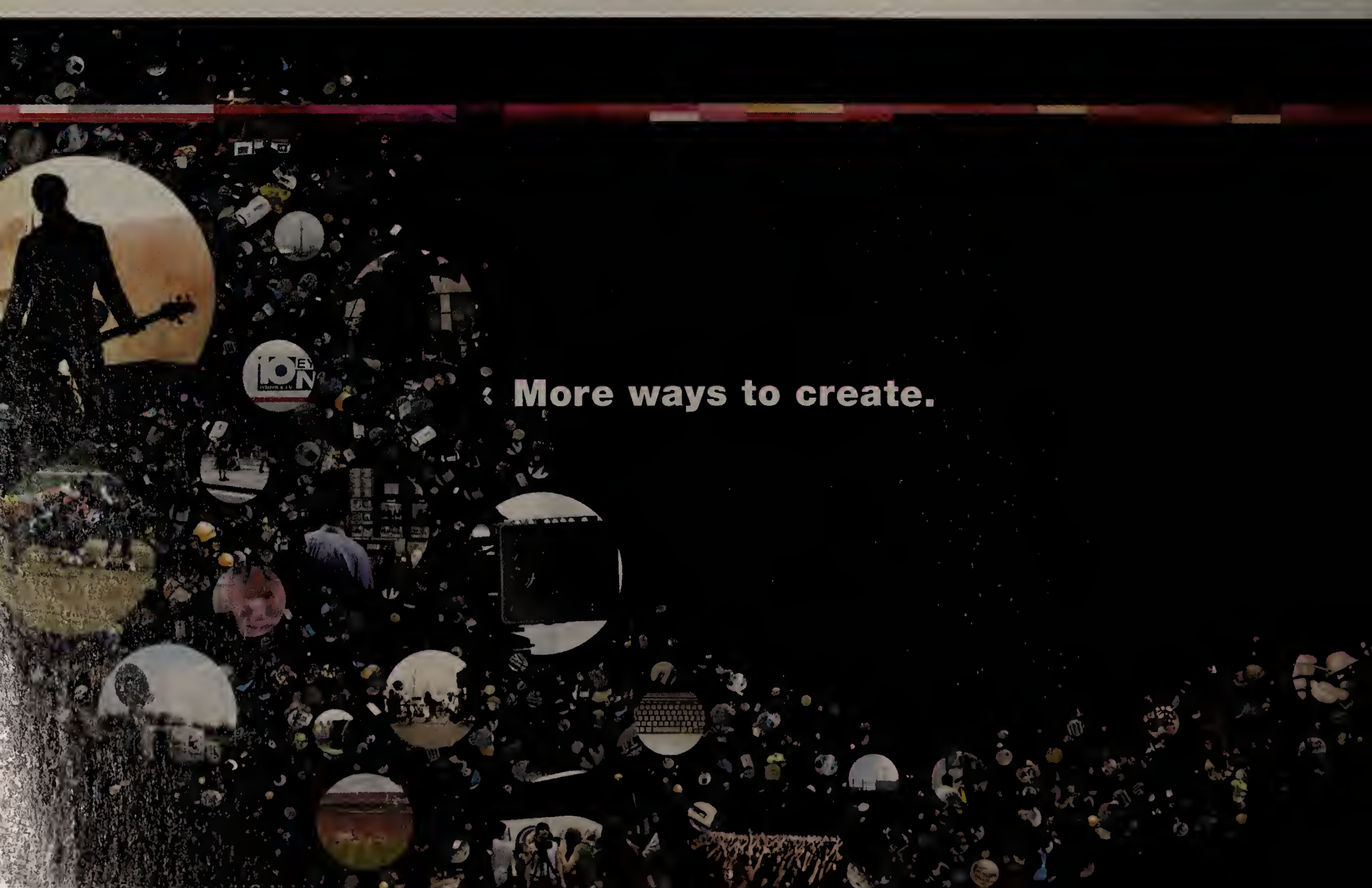
Disclaimer: As an organization in the education business, Harvard is required to collect certain information, but it has not expressed an opinion about the collection of extraneous information. So the above observation is mine.

Bradner is Harvard University's chief security officer. He can be reached at sob@sobco.com.

IT Roadmap security event

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www.nwdocfinder.com/1454



More ways to create.

Gartner touts Web 2.0, scoffs at 3.0

Web 3.0 just a marketing ploy, but collaborative tools are here to stay

BY JON BRODKIN

LAS VEGAS — IT executives just getting comfortable with having Web 2.0 technologies in their networks face a moving target: Web 3.0.

But this time, the buzzword is just a marketing ploy used to hype incremental improvements over the groundbreaking technologies that were labeled Web 2.0, analysts said during last week's Gartner Web Innovation Summit in Las Vegas.

"There are a lot of constituencies trying to hijack the term Web 3.0," Gartner fellow David Mitchell Smith said Thursday. These are mostly vendors pushing virtual worlds, the semantic Web and the mobile Web, Smith said.

Web 2.0 staples, such as AJAX, mashups, blogs and wikis, gained mass adoption after a few years in which there was not a lot of innovation in Web technology, said Gene Phifer, a Gartner distinguished analyst.

Gartner analysts are avoiding the temptation to give a new label to the latest technologies such as virtual worlds and the semantic Web, saying they're not providing the same kind of fundamental change as blogs, wikis and social-networking tools.

"It's not going to be another era like Web 2.0," Phifer said. "However, there will be some very interesting innovative things coming out. If

Web 2.0 in the enterprise:

Six keys to success

1. Start small and cultivate success.
2. Make it open and easy to use and reuse.
3. Expose connections and let users create structure, share bookmarks, use tags and so forth.
4. Links to e-mail, syndication.
5. Identify the right context.
6. Plan for growth.

SOURCE: GARTNER

you're in love with numbering schemes, maybe it's Web 2.1."

What's important to recognize is that Web 2.0 technologies are here to stay and, if IT helps nudge them along, can help improve collaboration and make businesses stronger, analysts said over the course of several sessions at the conference.

"The bad story [about Web 2.0] is client X comes up to me and says, 'We've implemented a blog, no one's using it, we implemented a

Six mistakes to avoid

1. Don't ignore accountability and responsibility.
2. Don't think of Web 2.0 as a passing fad.
3. Don't try to solve all with Web 2.0.
4. Build it with a business purpose in mind.
5. Don't overengineer — build for adoption.
6. Don't set too many restrictions.

wiki, everyone's using it, and nothing's working right," said Tom Austin, a Gartner fellow. "The biggest problem with Enterprise 2.0 is thinking about it as 'what product do I buy and how many people are using it.' This isn't an issue of provisioning telephone service."

Web 2.0 is coming into your business whether you want it to or not, because the line between work and personal lives is blurring and digital natives — young people — are

See Gartner, page 47

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More ways to consume.

PCI

continued from page 1

Toronto — the first meeting of its kind to bring the council's membership and certified PCI security providers together — the 300 attendees got a sneak peek at the new set of best-practices guidelines for application security that the council intends to publish by year-end.

"These will be guidelines for designing applications in a secure manner," said attendee Joe Lindstrom, senior director for professional services at Symantec, a QSA accredited by the council to perform on-site evaluations of businesses handling card-payment data to determine whether sensitive information is being processed or stored appropriately as defined by PCI DSS 1.1.

Lindstrom said the new application-security guidelines are under discussion by the council as something that would take effect in the fourth quarter of next year as a requirement above and beyond PCI DSS 1.1.

"These will be guidelines to designing applications in a secure manner," Lindstrom said. The new PCI rules would pertain to applications developed in-house or those acquired by certified application providers, he added. In addition, an emerging standard for PIN-entry devices for card processing is coming.

The 12 requirements of PCI DSS 1.1 include encryption of cardholder data, as well as more general enterprise mandates to use antivirus software and application-layer firewalls and to conduct periodic vulnerability assessments (see chart).

The council's Toronto meeting was closed to the press, with a council representative indicating the Wakefield, Mass.-based organization anticipates making official comment this week on the future of the PCI standards.

Big spenders

Businesses that handle card-payment data say they are spending mightily to hire QSAs to prove they meet PCI DSS 1.1. "PCI crosses any and all aspects of the organization," said Peter Clark, director of information systems at Jordan's Furniture, a retailer with stores in Massachusetts and New Hampshire. "It's a big canopy that covers everything."

Clark said the company is being certified for PCI compliance by Ambiron Trustwave, a certified QSA. "All of this needs to be completed by Oct. 1," he said. "It's a priority."

Jordan's Furniture has spent almost \$100,000 in the PCI compliance process to make changes the company hopes will result in a good report that will be shared with Visa, MasterCard and the retailer's acquiring bank, First Data Merchant Services.

Sean Smith, the director of strategic technology services at Indianapolis-based restaurant chain Steak 'n Shake, said his company also has an imperative to meet the Sept. 30 deadline for PCI compliance.

The digital dozen of credit card compliance

Merchants must employ the following to complying with the Payment Card Industry (PCI) Data Security Standard:

1. Install and maintain a firewall configuration to protect cardholder data.
2. Forbid the use of vendor-supplied defaults for system passwords and other security parameters.
3. Protect stored cardholder data.
4. Encrypt transmission of cardholder data across open, public networks.
5. Use and regularly update antivirus software.
6. Develop and maintain secure systems and applications.
7. Restrict access to cardholder data by business need-to-know.
8. Assign a unique ID to each person with computer access.
9. Restrict physical access to cardholder data.
10. Track and monitor all access to network resources and cardholder data.
11. Regularly test systems and processes.
12. Maintain a policy that addresses information security.

With the approval of its bank, Fifth Third Bank in Cincinnati, Steak 'n Shake is exercising an option under the PCI compliance rules that permit PCI self-assessment when the corporation has sufficient audit staff and the top management is willing to sign off on the results.

There may be some modest savings in this, Smith said, but the self-assessment process has been lengthy, starting in August 2006 and not yet complete.

"We have 500 locations, and identifying the gaps and proposing remediation took three months," Smith said. "Now we're rolling the technological controls out into the field, such as host intrusion prevention on laptops, antivirus, patch management."

The main thrust has been to bring the security at approximately 500 Steak 'n Shake restaurants, most of which are company-run, up to the level of the corporate headquarters to meet the PCI compliance requirements.

Smith said failure to achieve this could result in fines of \$25,000 to \$50,000 per month and a possible hike in card-processing fees. He said

he's not surprised that additional PCI requirements may be on the way, and anticipates that PCI will be an annual review process.

Symantec's Lindstrom acknowledged PCI compliance can be an expensive process, calling PCI the Sarbanes-Oxley of the card-processing world.

Fees for PCI-compliance evaluation run "from as low as \$20,000 to over half a million dollars," Lindstrom said. When businesses select a QSA, the first step typically is a basic security evaluation, carried out in tandem with business managers, to determine where the business might be "deficient and fall short of compliance."

Remediation to bring the organization up to PCI compliance then starts. If the process runs smoothly it could take a few weeks, but some companies don't make it through. "Some fail," Lindstrom said.

Getting a letter

PCI compliance often kicks off in earnest with a letter from the bank to the merchant. That's what's happened in the last few weeks at the Philharmonic Center for the Arts in Naples, Fla., which has 500 employees and handles about \$16 million per year in transactions.

The Philharmonic is not a top-volume card-processing merchant, so it doesn't have to meet this year's PCI compliance deadlines, but it may be among those facing a deadline of next year.

"Our credit card processors are pressuring our finance manager," said Anthony Garmont, the Philharmonic's network administrator. "The pressure is increasing every day, but as far as a specific date, I don't know."

The arts organization already follows PCI rules, such as regular vulnerability scanning, with its provider Alert Logic. Garmont said he finds a lot of the language associated with PCI to be "ambiguous and open to interpretation," but added there's no question the PCI evaluation process will be getting underway.

PCI is "forcing organizations to go look in the nooks and crannies of decades of systems integration," said Mike Urban, senior director of fraud solution at Fair Isaac, which makes products that detect credit card fraud. The evolution of PCI is extending the compliance mandate into areas such as point-of-sale terminals, where new requirements may mean retiring older ones.

"The new ones are more secure against tampering," Urban said. "There are several million point-of-sale devices, and getting them all upgraded will be a challenge." ■

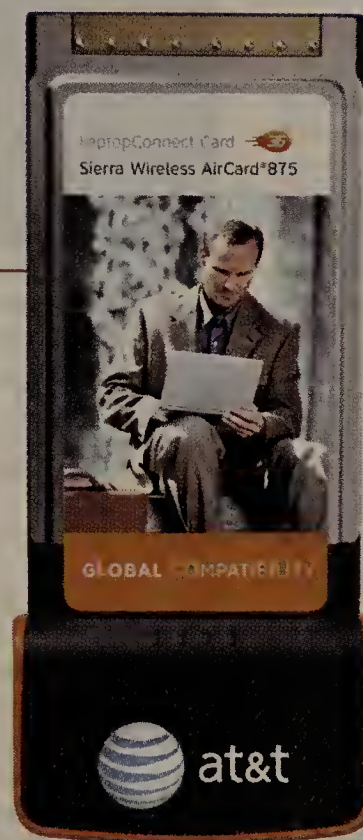
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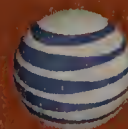


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Making better processes pay off

IT managers share tips for deploying ITIL, other best-practices frameworks

BY DENISE DUBIE

CHARLOTTE, N.C.—There are plenty of reasons to streamline IT processes using best-practices frameworks, such as the IT Infrastructure Library. But knowing the reasons doesn't make it any easier to do.

"You hear a lot of people talk about how standardizing processes and adopting best practices in IT is just common sense. And it is," said Rafael Rodriguez, associate CIO of academic and infrastructure services at Duke Health Technology Solutions, part of Duke Medicine in Durham, N.C. "But it's hard for me to follow a good, healthy lifestyle. It's not because I don't know what to do, [but because] it requires cultural change, and that can be the hardest thing to effect."

Rodriguez was among the IT managers who spoke last week at the itSMF USA Fusion 2007 conference, where close to 2,000 attendees heard how such companies as Mary Kay, GM and Wells Fargo made IT service-management improvements happen in their environments. Here are some of the lessons these companies learned along the road to success.

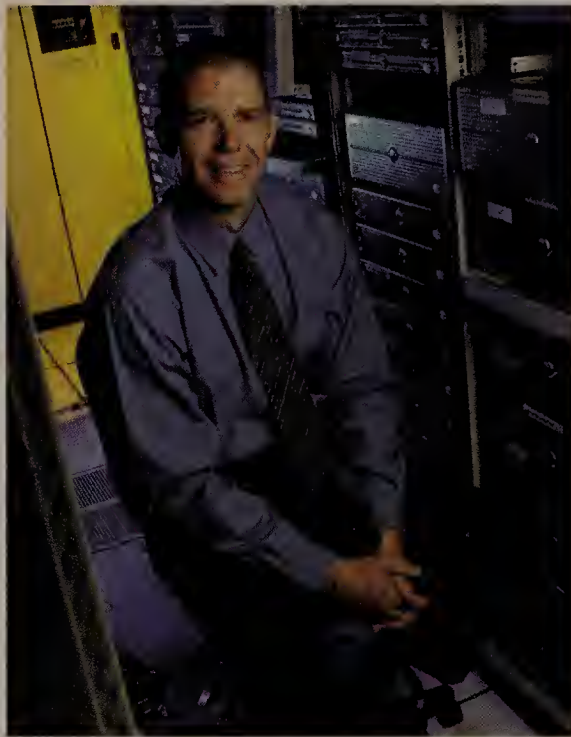
1. Get upper management's support. It's a common refrain, but the need for support from upper management is critical in a project that could involve nearly all aspects of IT. Until a new, supportive CIO came on board, David Farris said for five years he hit a cultural roadblock with management and staff while working to get ITIL processes in place.

"A single ITIL champion cannot succeed alone," said Farris, who is manager at the U.S. Department of Agriculture's Animal Plant Health Inspection Service, in Riverdale, Md. To keep momentum on such a project going, champions must "spend time and effort to convince and motivate others to participate."

2. Tie best-practices adoption to specific business goals. Configuration management meant nothing to business leaders until Joseph Kennedy explained that adopting better processes around this IT discipline would make sure applications at State Street in Boston were available when needed.

"I had to take everything I know about the technology and translate it into something relevant to the business," said the vice president of technology architecture and R&D. "The discussion became about resource improvements, fewer outages, more transparency and better responsiveness from IT to the business."

The same goes for Steve Moore, technology leader at Mary Kay Cosmetics in Dallas, who said explaining to business managers how consolidating systems, applications and processes would streamline IT operations wasn't as effective as telling them how the move to better processes would let Mary Kay,



Mary Kay Cosmetics' Steve Moore says a "master version of the truth" will help IT operations do their part as a company expands.

for example, open a location in Bangalore, India, more quickly.

"The business is growing fast and having a master version of the truth would make it easier to bring other locations on board and keep them standardized globally," Moore said.

3. Tailor best-practices adoption. Duke Medicine's Rodriguez said IT shops can fail at rolling out best practices when they focus on accomplishing all the goals associated with ITIL or Control Objectives for Information and Related Technology, and lose sight of goals specific to their organization.

"We have been working to improve operations since before ITIL came into our picture. We are implementing IT service management and ITIL is a means by which we are doing that," Rodriguez said.

4. Understand process interdependencies. ITIL introduced the concept of a configuration-management database (CMDB) to IT service managers, and now putting a CMDB in place is a priority of many enterprises. But Peggy Ranney, change manager at American Family Insurance in Madison, Wis., pointed out that change management technology is a prerequisite for establishing a federated repository of all configuration items in your environment.

"Change management is needed to keep the CMDB current," Ranney said. "It was necessary to implement change and configuration management together."

5. Put people before technology. Rodriguez warned show attendees to wait to acquire

process-related technology until the right people and processes are in place. "We in IT often suffer from technology arousal, in which we think there are all these tools and if I just had them, it would solve all my problems," he said. "That is how stupid decisions get made."

6. Mature to your desired level. The asset management processes Mary Kay has in place put it at about 80% success, according to ITIL standards — which is just fine with Moore. Citing financial and other factors behind Mary Kay's choice, Moore explained IT managers shouldn't try to reach goals that aren't necessary for their organization. "The reality is we didn't need the Cadillac of asset-management tools to obtain our goals," he said.

7. Automate where possible. A side benefit of streamlining processes is being able to automate redundant tasks and ultimately improve application uptime. "To operate in today's environments, IT managers have to be experts in multiple disciplines and code on the fly, and that is not realistic. Code quality has gone way down over the year because of it," said State Street's Kennedy. "Automating the processes around configuration management helps ensure applications are configured consistently and are available to the end client."

8. Quantify the cost of noncompliance. Moore said IT staff in his company typically address problems brought up to them in the hallway, at the water cooler or at lunch without putting the service request into the trouble-ticketing system. "It seemed very un-Mary Kay-ish to some people to say no to requests made in an unofficial way," he said.

To keep staff committed to using the processes, Moore said he provided downtime metrics to IT managers who made a change or fixed an issue outside of the system. "I was able to directly tie recorded downtime or cost with data about the unrecorded change and show how, if it had been done according to standard process, the overall system would not have been negatively impacted," he said.

9. Measure and adjust. Though it can be hard to associate process improvements with ROI, American Family Insurance's Ranney said a project cannot move forward unless proper measurements are taken. "Measuring the success of new processes is critical to the overall success of the initiative," she said.

Duke Medicine's Rodriguez agreed that post-deployment measurements are important and should include feedback from users. "You have to see these from their perspective" because improving processes and cutting costs are only part of the goal, Rodriguez said. IT service-management process improvements are about better service delivery to the IT client. ■

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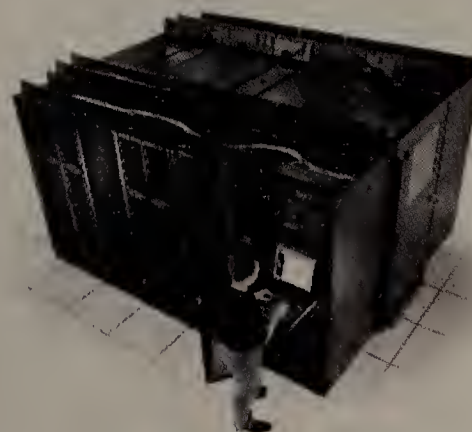
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Using virtualization to boost efficiency

BY RICH LECHNER

The U.S. Environmental Protection Agency recently proclaimed that data centers consumed 61 billion kilowatt-hours of electricity in 2006. That's roughly 1.6% of total U.S. electricity consumption and is worth about \$4.5 billion. Assuming current trends continue, by 2011 the national energy consumption by data centers is expected to nearly double, making energy efficiency a top priority for CIOs.

One technology that can help companies increase efficiency is virtualization, which can play multiple roles in the data center.

Virtualization makes it possible, for example, to divide a single server into smaller virtual servers, or pool smaller, individual machines so they can perform as one larger system. Gartner estimates that more than 90% of companies using virtualization are doing so to reduce x86 server space and costs. In fact, the company estimates that virtualization cut the x86 server market by 4% in 2006.

Power savings can be even greater when addressing storage assets. Storage resources — which IDC says are growing 50% per year — are among the largest consumers of energy in the data center, in most cases consuming 13 times more power than processors. What's more, use of storage assets is often 25% or less, making this environment almost as inefficient as x86 servers. Storage virtualization can drive up use rates from 25% to 60% or more.

Applying virtualization technologies across all system assets, including servers, storage and network devices, can allow companies to tap into unused capacity without adding resources that draw more power. The most energy-efficient equipment is equipment that's no longer in use, whether it's a server, a router or a storage device.

Achieving that, however, requires centralized management of virtual and physical devices, because, while virtualization helps address cost through consolidation of physical resources, it adds complexity by increasing the number of virtual resources that need to be managed.

Gaining a more accurate understanding of the relationships among physical and virtual resources enables administrators to manage the infrastructure in a more integrated, holistic way. Systems-management virtualization tools that manage all resources — physical and virtual — can help manage the resources in an integrated fashion from a single dashboard, significantly reducing the number of tools required and the cost of administration to support multiple types of servers. These tools can also help relocate virtual servers automatically

in order to take advantage of lower utilization rates and help administrators inventory server and storage devices, monitor the health of these devices, manage maintenance and prevent downtime.

However, a common problem organizations face is the difficulty in determining how and for what purposes employees are using virtual resources. To drive a successful energy-efficient

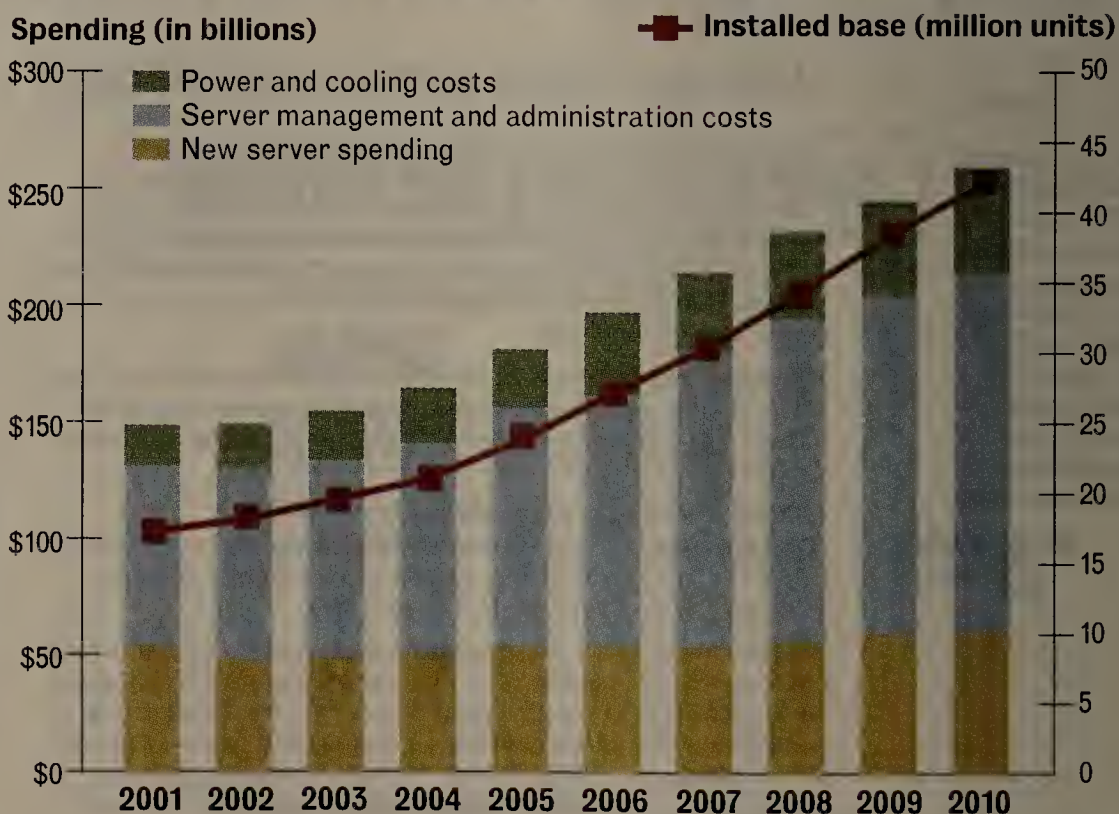
date and virtualize servers can accurately charge for related use.

Factoring virtualization into chargeback processes not only enhances the process by more tightly mapping companies' resources to business units, but also allows them to stretch their budgets to focus on energy-efficient programs.

The energy issue hasn't escaped the attention of power companies or government organizations. More than 80 local utility and state energy-efficiency programs are offering rebates for increasing energy efficiency. Pacific Gas and Electric of California, for example, has approved a plan to reimburse part of the costs for server- and storage-consolidation projects, including software, hardware and consulting, up to a maximum of \$4 million per customer.

An energy-efficient data center is not optional today — it is a necessity. And virtualization technologies can lead to power sav-

The escalating cost of power



SOURCE: IDC, VIRTUALIZATION 2.0: THE NEXT PHASE IN CUSTOMER ADOPTION

program, you should be able to identify which resources are used and whether they are physical or virtual.

IT chargeback methodologies can also help improve IT accountability and resource alignment. Existing tools, for example, can monitor use of applications, servers and other IT resources, so organizations that wish to consoli-

ings that result from consolidating hardware and improving utilization rates, providing you also adopt proper management tools and methodologies.

Lechner is vice president, IT Optimization at IBM. He can be reached at GoGreen@us.ibm.com.

A man in a white shirt and tie is painting a wall in a server room. He is standing on a ladder, using a roller to apply paint. The wall is a vibrant green. In the background, another man in a white shirt and tie is walking towards the camera, holding a red cup. The server racks are visible in the background, and the floor is made of large square tiles. The IBM logo is in the top right corner.

IBM

_INFRASTRUCTURE LOG

_DAY 89: Our power and cooling costs are out of control! These boxes throw off so much heat. The energy costs are staggering. We're spending the bulk of our IT budget just keeping the data center cool. I told Gil we need to go green in a big way.

_DAY 91: Gil made the data center green. Kelly green, to be exact. There's got to be a better way.



GEARHEAD

Mark Gibbs

PHP, WAMP and XAMPP, oh my

Last week in Gearhead (www.nwdocfinder.com/1725) I discussed the struggle to get my hosting provider to give me a server with the version of PHP I needed to run a PHP-based groupware system.

A remarkable number of you wrote in with recommendations. Reader Darrow Cole (Los Angeles) recommended a different hosting provider, Knownhost, and reminded me about

Web Hosting Talk, a useful resource for discovering who provides services and how much their clients love or hate them.

Another early responder was *Network World's* own Lord of the Revels, Dave Kearns, who recommended first testing PHP scripts under WAMP, at <http://www.wampserver.com/en/>.

The latest version, WAMP5, is an installer that (du'oh) installs and configures Apache 1.3.31, PHP5, MySQL database, PHPmyadmin and SQLite-manager on Windows. Voila! An instant test environment offered as donate-if-you-want-to-ware.

By the way: When you install WAMP in a virtual machine under VMware and use the snapshot feature, you have a fantastic mechanism for testing. Snapshots let you save a virtual machine in a specific state, which means you can have both fast start-ups and known configurations for chasing down problems.

Reader Michael Moro recommended an alternative to WAMP: XAMPP, which in addition to PHP also installs Perl and does so not only on Windows but also on Linux, OS X and Solaris.

I tried out both systems with an eye to jump-starting the PHP-based software that had originally sent me down this dark path, Simple Groupware.

Installing WAMP is extremely easy, and installation of Simple Groupware was just as simple — I just copied the files unpacked from the dis-

tribution archive to a subdirectory under WAMP's default root. When I loaded the WAMP default home page, there was the new subdirectory listed as a "project."

Clicking on the new project link on the WAMP home page caused the Simple Groupware setup page to run, but it immediately noted that I needed to change the maximum memory parameter in `php.ini` from 8MB to 16MB. It also noted that I was missing a PHP extension named `php_gd.dll` and needed to install it. That was odd because its upgrade, `php_gd2.dll`, was already installed by default and the Simple Groupware documentation implies that either will work.

As much as I'd love to chase down why `php_gd2.dll` wasn't recognized, I'm a busy guy, and I have an editor waiting ... so, let's try XAMPP.

Again, like WAMP, XAMPP is an easy installation although it takes about twice the time for the installer to simply copy files. But the system includes Mercury Mail which is an SMTP/POP3 and IMAP4 server. Cool.

So I move the Simple Groupware subdirectory from the WAMP Web root to the XAMPP root. On loading the Simple Groupware setup page, it immediately becomes obvious that XAMPP is noticeably slower than WAMP, but at least the `php_gd` issue doesn't appear. But when the installer page for Simple Groupware runs, I keep getting timeouts, because the script is taking more than 60 seconds to run.

I set the maximum timeout value in `php.ini` to 120 seconds, but I still get a 60-second timeout error despite restarting the server several times. Finally, I resort to setting the Apache server priority using Process Explorer to "high" (that's the next level above "above normal"), and the setup completes.

After all that, there's another few minutes of configuration and ... well, next week we'll find out whether Simple Groupware lives up to its name.

Gibbs struggles with his daemons in Ventura, Calif. Exorcise his woes at gearhead@gibbs.com.



Keith Shaw

COOLTOOLS

Another DEMO, another batch of 'cool'

If it's September, it must be DEMOfall, in which I get another opportunity to see what's hot in the world of start-ups and innovation. While there are lots of new products and services for the enterprise launching at this week's show in San Diego (see page 12), for me it's always about seeing the cool stuff. (Disclaimer: The *Network World* events team runs the DEMO events).

A total of 70 companies will be launching at this year's show. Here's a quick look at the ones in the consumer or small-to-midsize-business market that I think have a shot at becoming the "next big thing."

Vello: The company's service lets users create instant telephone conferences without having to use special phone numbers or create personal identification numbers that attendees need to store in an e-mail or memorize. After a conference initiator creates a conference through the Vello.com Web site (or BlackBerry), the service automatically calls all participants at the scheduled time of the conference and automatically connects them to the call.

MyQuire: Two words that scare the heck out of me are "project management," yet I have many projects at work and at home that require additional people to complete. MyQuire aims to bring project management (the company prefers the term "online coordination") to the masses through a visually pleasing interface that merges social-networking concepts with Web-based collaboration, real-time conferencing and Web-based file storage.

SceneCaster: If you ever enjoyed building 3-D rooms or buildings in the game "The Sims" or in the Second Life virtual world, you'll likely want to delve into SceneCaster, which lets you build virtual "scenes" but without having to learn a complicated programming language. With easy drag-and-drop tools and a browser-based interface, SceneCaster will let users

create their own virtual spaces, whether they're representations of a real-life living rooms or fantasy landscapes.

Fluid Innovations: Online prediction markets have been around for a while, but the VirtualVentures.com "game" from Fluid Innovations takes it a step further — asking participants to predict what types of enterprise software technologies will succeed in the marketplace. Think of it like playing the game, "Who Wants to be a Venture Capitalist?"

Vyro Games: The company's Personal Input Pod (PiP) will breathe stress-free air into the world of video games. Instead of games that get you stressed out and have you reach a goal through action, the Vyro Games and hardware device (the PiP fits between your index finger and thumb) require that users be relaxed in order to succeed. The games will offer PC users and mobile phone owners to take a break from a busy day and become more relaxed.

Ncursion: Combining the world of social networking with interactive gaming, Ncursion will launch its MyGladiator.com offering for Facebook users. The game lets players create their own virtual gladiator to take on other Facebook users in a virtual battle-to-the-death, and other spectators can watch the matches and bet some virtual gold on the outcome.

Longer profiles of each of these companies and more will be online at www.networkworld.com. Also, be sure to check out DEMO videos at www.demo.com, as well as *Network World's* own video, blogging and podcast coverage of this week's show.

Shaw can be reached at kshaw@nww.com.



Vyro's Personal Input Pod (PiP) is a stress reliever.



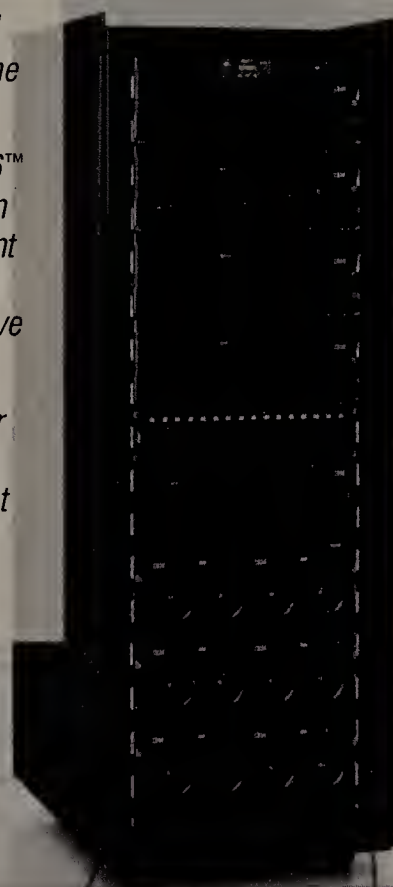
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Go green with IBM: IBM Services can help design your data center, holistically, for better energy usage. With outstanding technology and people who understand what that technology can do for your business, IBM can help make your data center green.



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¹ Currently available on IBM System x and IBM BladeCenter servers. Expected to be available on IBM System i and System p servers 11/07. Energy management capabilities of IBM Systems Director are not available on IBM System z. ² Advanced Power Virtualization is optional and available at an additional charge. ³ For complete details, go to ibm.com/takebackcontrol/claim. IBM, the IBM logo, Cool Blue, POWER6, System p, Take Back Control, System x, BladeCenter, System i and System z are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. © 2007 IBM Corporation. All rights reserved.

IBM challenges Office with free apps

BY JOHN FONTANA

A week after formally joining the effort to develop the productivity applications Open Office.org, IBM last week released into beta its own implementation called IBM Lotus Symphony and took direct aim at Microsoft Office.

IBM is making the suite of document, spreadsheet and presentation applications available free, and hopes to attract business, academic, government and consumer users. The company has not announced a ship date for a final release of Symphony, which is based on OpenOffice.org 1.2.

But identical versions of the applications are shipping as embedded tools in Notes 8, which was released last month.

IBM Lotus already has a suite of productivity tools called SmartSuite, but the company has not made any investment related to the tools in the past few years and doesn't plan to start now, according to company officials.

"Symphony editors are the strategic investment going forward," said Ed Brill, business unit executive for worldwide sales at IBM Lotus. "We are providing import filter capabilities so SmartSuite files can be brought into the Symphony editors and be carried forward with formats like Open Document."

IBM has been a vocal supporter of Open Document Format and a nagging critic of

Microsoft/Ecma's competing OpenXML format, which neglected to get the stamp of standardization from the ISO two weeks ago.

IBM's timing for its renewed push into the productivity applications market is no coincidence, and it puts IBM on the front lines to battle Microsoft Office, Google, Sun and others offering free, open source and hosted options on collaboration tool sets that include productivity applications and options for integration with business workflows and applications.

IBM's announcement came a day after Yahoo bought Zimbra's collection of open source collaboration tools for \$350 million and said it will target university, business and ISP markets.

IBM's Symphony is made up of Lotus Symphony Documents, Lotus Symphony Spreadsheets and Lotus Symphony Presentations. The same core applications are found in Microsoft Office and suites from Google, Sun (which is also based on OpenOffice.org) and others, such as Zoho.

Symphony applications run on Windows and Linux and support multiple file formats, most notably the Open Document Format, but also Microsoft Office. They also support and the ability to output content in PDF format.

IBM said it would eventually offer paid support around Symphony, but for now support is being delivered via Web forum and communi-

ty support tools on ibm.com.

IBM is attacking the productivity market from the desktop side, while the prevailing vendor trend today is to offer applications that live online and are accessible from anywhere.

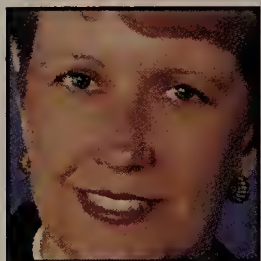
"There are different approaches in the market going on now, including the locally installed rich-client approach, but we are aware of interest in software delivered as a service, and it is something we are following," said IBM's Brill.

In January, IBM Lotus introduced Lotus Connections, a set of server-based social-networking services accessed over a network. At the time, Lotus said it was working on another wave of social-networking services that targets business intelligence, real-time communications and Web 2.0 applications.

Also Tuesday, IBM introduced an e-mail-delivery service around hosted Notes messaging.

"In the end, I want both offline and online capability," says Rob Koplowitz, an analyst with Forrester Research. "I want online capability because a hosted app is accessible from anywhere. And I want client-side software because I take these things offline. So ultimately the world of Google and the world of Symphony have to come together. And ultimately Microsoft has to address this as well." ■

IT on a shoestring budget



CACHE ADVANCE
Linda Musthaler

A few weeks ago, Howard Anderson wrote a column titled, "The life of a CIO: It's not pretty" (www.nwdocfinder.com/1726) in which he used the example of his friend Gomez (not his real name), the CIO of a large company. If the job Gomez has is not pretty, then it must be downright ugly to be the CIO of a large non-profit organization (NPO).

My friend Claire (not her real name) heads the IT department at a regional NPO that serves more than 80,000 people in Southeast Texas. Claire faces many of the same technology issues

that Gomez does, with one big exception: Her budget is a fraction of a corporate IT budget.

Most public-serving NPOs operate on a shoestring, given that their money often comes from grants, donations and a shrinking share of United Way contributions. If a corporate CIO thinks it's tough to tin-cup the business divisions for funds for that great new project, he should try raising funds by selling cookies and asking the public for donations.

The corporate CIO moans when he has to stretch his PC life cycle to three or four years before buying replacements. Claire, on the other hand, is grateful to receive those old hand-me-downs through a United Way program that funnels "end of life" corporate equipment to NPOs. Claire's staff supports a wide variety of equipment that is one or two generations behind today's technology. They would love to standardize on one device or even one vendor, but as the saying goes, beggars can't be choosers.

Claire's NPO has 100 or so employees spread across multiple locations. Some would like to work from home but can't because they aren't able to access office systems from home or other remote locations. The organization is trying to roll out VPN service for all employees, but budget constraints are hampering that project. Claire has to depend on software licenses structured for NPOs, and they are often very limiting — if

they are available at all. At times, she doesn't have the luxury of choosing her software applications based on features and functions; she has to acquire whatever can fit into the meager budget.

Claire maintains a database of at least 80,000 current members (customers) and another couple hundred thousand former members. Every customer record has to be updated or archived at least once a year, and in the span of a few weeks during the fall, she adds a few thousand new customers to the database. This kind of activity puts a strain on the old hand-me-down servers, but somehow they manage.

Disaster recovery planning is a part of Claire's job, too, and Southeast Texas is especially prone to hurricanes and floods. One of the organization's remote locations was knocked out of commission two years ago by Hurricane Rita. Fortunately the United Way of the Texas Gulf Coast provides a failover site in the event Claire's NPO encounters problems again; Sungard's services are too expensive for her.

Earlier I referred to the IT department. It's really just a handful of talented and very resourceful people. Claire needs a bigger staff, but — repeat after me — there's no budget. While I'm not privy to salary information, I'm guessing these people make a fraction of what their counterparts in corporate America make. This makes it tough for Claire to attract and hold on to good talent. If Gomez thinks it's hard to find good people for his department, he should cut the salaries in half and see who accepts his job offers.

The NPO does allocate capital funds to cover major expenditures. Still, Claire's IT wish list is long. I have the utmost respect for how much she manages to accomplish with practically nothing in her coffers. So for all those corporate CIOs who think their lives aren't pretty, maybe they need another benchmark.

Musthaler is a principal analyst at Essential Solutions, a Houston technology assessment firm. She can be reached at lmusthaler@essential-iws.com.



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but I've got a funny feeling we're
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One, two, three screens won't be enough



EYE ON THE

CARRIERS

Johna Till Johnson

goes far enough. For one thing, I don't think three screens (or any fixed number) will suffice.

The right way to look at Internet use, in my book, is to assume that each individual owns and operates a number of Internet-connected devices: one or more phones with varying bandwidth capabilities and applications (voice, video, e-mail and so forth); one or more PCs with multiple Internet connections (Wi-Fi, wireline, Evolution Data Optimized); and one or more TVs (given that most households have more than one TV, though most aren't Internet-connected yet).

That's not all. Many users also have multiple network-attached (or capable) devices, which, while they don't connect directly to the Internet, may do so in the near future: cameras with USB links, Ethernet-attachable printers and so forth. Cisco senior vice president and general visionary Jayshree Ullal likes to make the point that we should assume any device capable of an Internet attachment ultimately will get one. I think she's right.

So, instead of assuming a mere three screens,

Paradigm shifts are funny things. As Malcolm Gladwell points out in his best-selling book, *The Tipping Point*, often there's an abrupt transition between old world-views (or behavior patterns) and new ones. Yesterday, nobody even dreamed of phones that take pictures. Today you're lame if you don't have a cell phone camera.

I recently noticed that AT&T is promoting its "three-screen" vision — meaning, in essence, that the Internet will reach users in three distinct ways: the TV screen, the PC screen and the mobile device. I like the idea, but I don't think it

we should be thinking in terms of multiple screens (and Internet applications) per user.

Why does this matter? For a couple of reasons. First, the three-screen view underestimates the per-user consumption of Internet bandwidth. Most of the telcos and equipment providers I speak with assume the old model of Internet connectivity will prevail. That model measures Internet connectivity to each household (or workplace) — not to each user. Big mistake. Users consume far more connectivity (generally from multiple providers) than this model accounts for.

Second, it underestimates the impact of peer-to-peer traffic. Peer-to-peer has gotten a bad rap because of copyright infringement issues, but even taking those out of the equation, an increasing amount of Internet traffic results not from users accessing sites, but from users communicating with each other in bandwidth-intensive ways: not just voice, but interactive video (including telepresence) and file-sharing.

This is a very big deal, because it affects architecture end to end. Consumer providers often assume downstream traffic to each user is far greater than upstream traffic from that user. Read the fine print on your contract — it probably prohibits you from setting up your own server, and defines massive upstream transmissions as an abuse of the service.

That's broken. If carriers truly buy into the many-screen view of the future, they should recognize that symmetrical bandwidth (equivalently large upstream and downstream links) is the way to go. So, providers and equipment vendors, listen up: A paradigm shift is headed our way. And if Gladwell is to be believed, it will happen faster than you expect.

Johnson is president and senior founding partner at Nemertes Research, an independent technology research firm. She can be reached at johna@nemertes.com.

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'Net Buzz

continued from page 50

abb@doeinvestor.net and continues on from there. Brute forcing basically generates and sends out an e-mail to every possible combination of characters/e-mail addresses at any given domain. A dictionary e-mail Spam basically uses all of the words that would be included in a dictionary or combinations of words which generally produce quite a few valid e-mail accounts. This type of method would not be inhibited by using a separate e-mail address for each business account you may have.

We have no reason to believe that any of our systems have been compromised. Ameritrade deploys state of the art firewalls, intrusion detection, anti-virus software as well as employs a full time staff of employees dedicated strictly to Information Security and protecting Ameritrade's systems from unauthorized access."

Don't you just love the idea of a customer service rep giving an IT security expert a lesson about spam?

Anyway, Fritsch tried again: "I suggest you review the security of your customer data. I and the man who hosts the receiving e-mail server are both computer and network securi-

ty specialists and if a full-blown dictionary spam attempt had been made the source would have been cut off long before it got to the combination of 'ameritrade.'"

This time the rep at least had enough sense to break from the script and boot this one upstairs.

"Mr. Fritsch,

We take the security of our client data very seriously. I have forwarded your notes to our Management Team."

While Ameritrade insists it was working diligently — and hiring specialists — to stem the flow of spam, all of those efforts proved ineffective until recently ... and customers remained in the dark.

In August 2006, Fritsch tried again to warn Ameritrade, this time providing samples of the spam that was hitting his Ameritrade-only account. At this point it's clear that the matter has Ameritrade's attention, even if the company was not sharing those concerns with its client base.

"Dear Joshua Fritsch:

Thank you for reporting that you received spam e-mail at an e-mail address you use with TD Ameritrade.

We take your privacy very seriously, and are conducting a thorough investigation into this matter.

If you haven't already, we would appreciate it if you would reply to this message and provide the following:

- The date the e-mail was received
- The address the spam was sent to (your e-mail address)
- The e-mail source (the 'from' address)
- Whether this was the first occurrence

We sincerely appreciate your cooperation and patience as we work to get to the source of this."

Fritsch had already sent what they requested, but he sent more, just to be helpful.

Finally, near the end of August — again, this is 2006 — Fritsch received this e-mail from Ameritrade:

"Joshua Fritsch,

We have received many headers from various client reports. At this time there is no need to continue to forward this information to TD Ameritrade. We appreciate your cooperation in our investigation."

And another full year would pass before 6.2 million Ameritrade customers would learn that all that spam they had been getting was more than just spam.

Something to say? You can trust me with your e-mail address. The address here is buzz@nww.com.

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A screenshot of the DNSreport web interface. It features a title 'DNSreport' with a help icon, a subtitle 'See if there are problems with your DNS hosting', a text input field, and a 'DNSreport' button. Below the input field is a note: '(Enter zone name, such as "example.com", not an IP)'.

DNSreport
See if there are problems with your DNS hosting

DNSreport

(Enter zone name, such as "example.com", not an IP)

Federal CISOs seek mobile security

Government agencies' adoption of telecommuting has lagged far behind goals

BY TIM GREENE

Despite official urging, telecommuting within federal agencies is languishing, in part because standards don't exist for how to secure mobile endpoints — mainly the laptops telecommuters would use when outside the office.

Federal CISOs, who are aware of data breaches in both the public and private sectors that have compromised personal information of thousands of people, say that security of laptops — the key to most telecommuter programs — is their biggest worry.

At the same time, government managers face existing federal laws dating to 2000 that mandate telework programs. In addition, new pressure is being applied for them to encourage more government workers into telecommuting programs as an attempt to dramatically boost the number of work-at-home employees.

Some government CISOs say the best course of action is to follow best practices set down by the National Institute of Standards and Technology (NIST), the closest thing to certification available.

NIST recommendations include such basics as installing, running and updating antivirus software; periodically scanning machines with spyware-removal software and adopting a "paranoia level" of security awareness when writing personal firewall rules.

NIST also encourages encrypting data on laptops and as it is transmitted and the ability to remotely lock down laptops reported lost or stolen — good advice but not as formal as top federal network security executives want.

The General Services Administration (GSA) — which has championed telecommuting for years — has set a high bar for its own program. At a recent forum run by the industry group Telework Exchange, GSA administrator Lurita Doan called for a dramatic leap in telecommuting for her agency by the end of 2009.

With just 10% telecommuting today, she set goals of 20% to be telecommuting by the year-end and 40% by the end of 2009. According to published GSA estimates, just 4% of federal workers telecommute today.

The U.S. Office of Personnel Management breaks that down further, saying that of those who telecommute, only a quarter of them do so three or more days per week, and 39% do so less than once a week but at least once a month.

While other factors weigh into the slow adoption rate, a recent survey of federal CISOs found that 63% say securing mobile devices used at home is their top data-security priority,

but they have no way to know that their precautions are adequate.

The overriding problem federal CISOs face is that there is no official certification of mobile devices that assures them that laptops they issue comply with the Federal Information Security Management Act (FISMA), which contains the blueprint for all federal telecommuting.

According to a survey by Telework Exchange, 83% of these CISOs want certification of what comprises a secure mobile endpoint. The survey is based on responses of 35 out of 117 federal CISOs.

They want secure machines but also want the security to work without much user intervention, a complication that could reduce willingness to telecommute in the first place. "Let's just face it; we as people just want access. We don't really care about security," says Dennis Heretick, CISO for the Department of Justice, at a recent forum on federal telecommuting.

As a result, his department issues work-only machines to telecommuters that the department maintains. They are locked down using data-rights management software that blocks inadvertent copying of sensitive information.

Despite efforts to make working from home as painless as possible, FISMA requires federal agencies to train telecommuters in securing their hardware, another barrier to some poten-

tial telecommuters.

For instance, the Department of Energy encourages working from home, but only 9% of employees do — significantly short of the department goal of 15%, according to Rita Franklin, Energy Department deputy chief human capital officer. But the demographics of the department reflect a workforce that averages 49 years of age — what she terms the dinosaur generation — that is skeptical about telework, according to Telework Exchange's account of her presentation to the forum.

That is bad news for the Bureau of Engraving and Printing, which is in charge of minting money. Michael O'Leary, the bureau's program manager in operations support, says that offering work-at-home programs is partially intended to delay a "retirement tsunami" that could gut the agency of its most experienced workers.

Meanwhile, CISOs are directed to NIST recommendations for securing mobile devices. These include strong authentication and logging all activity by remote users and guarding those logs.

The guidelines also call for physical security, such as cabling laptops in place if they are used in one location for a long period and establishing a procedure for reclaiming telecommuting gear if an employee is fired.

Training users is also key to any home-worker program, including education about risks and the proper use of security software, NIST says.

The recommendations call for double-wrapping laptops in personal firewalls, residing on the device as software and a second hardware-based firewall sitting between the device and the Internet. The hardware device can include a VPN.

See Federal, page 34

How the Feds protect mobile data

A survey of 35 of 117 federal CISOs found these methods are being used to guard against data theft:

Remote data deletion for lost or stolen devices: 46%

VPN for remote connections: 57%

Multifactor authentication: 69%

Annual user data-security training: 94%

SOURCE: TELEWORK EXCHANGE

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Daylight-saving time issue redux

Nov. 4 is key deadline for rolling out patches

BY JOHN FONTANA

The daylight-saving time scramble of last spring may be in need of a cleanup this fall for companies that spent the summer rolling out new servers, desktops and time-sensitive applications.

Clocks will "fall back" to standard time on Nov. 4, but companies with unpatched systems will fall back a week earlier, throwing off calendars, transaction systems and anything that relies on clock time for accuracy and execution.

DST kicked off March 11 this year, three weeks earlier than previously, and comes to a close one week later — Nov. 4 instead of Oct. 28 — as part of the Energy Policy Act of 2005. That milestone had corporate users scrambling to patch systems so they would not suffer time-related hiccups in their operating systems, applications and other infrastructure.

Early this year, most major IT vendors, including Cisco, IBM, Microsoft, Novell, Red Hat and Sun, rolled out DST fixes for their products. Now the fall-back side of the DST issue could be a problem for companies that rolled out new computers or applications after March 11. Systems that haven't been updated with the correct DST patches will revert to standard time a week early.

"That will make you an hour late to all your meetings," says Eric Schultze, chief security architect for patch vendor Shavlik Technologies. "Companies without patch management processes that scrambled in March are going to scramble again." Machines that were patched last spring are set, he says. "It is the computers you just bought last month that might not have

Daylight-saving time checklist

"Fall back" has another meaning this year as corporations return to the daylight-saving issues they corrected in the spring and recheck systems rolled out since then to assure they are patched.

Take inventory of servers, desktops and applications that were rolled out after March 11, the day daylight-saving time kicked in this year.

Focus particularly on Windows PCs, Java programs, calendaring, billing and other time-related applications.

Check with vendor Web sites to confirm what patches are needed and validate those patches are installed.

Verify that Windows desktops and servers using automatic updates via Windows Server Update Services have downloaded and installed patches.

Check other copies of Windows-based systems, especially those that are not automatically updated.

Complete testing by Oct. 28. That is the day unpatched systems will revert to standard time, which is one week before the new date Nov. 4.

Be aware that network time servers will not solve the problem.

the patches on them, or the systems you have rebuilt that need the patch reapplied," he adds.

On the Microsoft Windows side, Schultze says even those new Vista machines will need a patch.

The good news is that Windows users whose systems are configured to run Windows Server Update Services, Microsoft's online patch site, have received the DST patch automatically. The patch supports Vista, Windows Server 2003 and XP SP2. A DST patch for products in extended support, such as

Windows 2000, XP Gold or XP SP1, costs \$4,000 from Microsoft. Patch vendors such as Shavlik have built a replica of the extended support patch, however, and make it available to their customers. Microsoft offers a support center for IT pros.

Schultze says the DST issue won't be nearly as big as it was in March. "I think for a corporation, probably 20% of their machines have turned over since spring, so it is probably that percentage of machines that could be impacted and need to be checked," he says. ■

Federal

continued from page 32

"Operating both a software personal firewall and a separate device provides the opportunity to screen out intruders and to identify any rogue software that attempts to transmit messages from the user's computer to an external system," NIST says.

Browsers should be configured to limit potential weaknesses, such as plug-ins, Java and Active X, which can increase the attack vectors from Web sites. Disabling or selectively removing cookies should also be considered, NIST says. Similarly, unused elements of operating systems should be disabled. Both Web browsers and operating systems should be kept up-to-date with patches.

Threats originating in e-mail also are a worry. For example, the Department of Justice has forbidden employees to use their work e-mail from their private home com-

puters because securing e-mails as they crossed the wire and were stored proved to be too difficult, according to Heretick, the department's CISO, speaking at a Telework Exchange panel.

Security isn't the only hurdle, or even the most difficult one, facing telecommuting, according to the latest report to Congress from the U.S. Office of Personnel Management.

Concerns about having enough people in offices to handle public demand is the top barrier to adopting work-at-home programs, with 73% of the 78 agencies that participated in a survey by the office. Next is an organizational-culture bias against telecommuting, at 54%, followed by resistance from agency management, at 52%. Security came in fourth, at 44%, citing that as a barrier.

The top four responses to these hurdles are training managers, training workers who telecommute, spending more on equipment and bolstering in-house marketing programs to

make telecommuting seem more attractive.

The prime motivation for encouraging telecommuting for federal workers remains disaster recovery, which raises a whole separate set of concerns for government IT security planners. Not only will devices used at home have to be protected, but so will the applications they are accessing, and that set of accessible applications can change dramatically with a sudden spike of home workers resulting from an emergency. Possible scenarios include disasters that destroy government offices, transportation disruptions and widespread epidemics that quarantine the workforce.

That will mean somehow securely admitting workers to sensitive servers formerly banned from use by remote workers, Commerce Department CISO Michael Castagna said at a recent Telework Exchange forum.

"It's going to force us to rethink security on the fly," he said. ■

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Salaries are up, but spirits

■ TYPICAL RAISES BEAT NATIONAL RATE OF INFLATION, BRINGING AVERAGE BASE PAY TO \$86,700. YET, NETWORK PROFESSIONALS AREN'T HAPPY WITH THEIR SALARY PACKAGES, OUR ANNUAL SURVEY FINDS.

BY BETH SCHULTZ

A storm seems to be brewing in the IT job market. Pay raises have continued to outpace inflation and bonuses are downright impressive — 11.6% on average. Yet, as the 2007 Network World Salary Survey finds, dissatisfaction over the salary package is rampant.

On average, the 1,789 respondents to this year's salary survey, conducted with the help of research firm King, Brown & Partners, saw their base pay rise 5.2%, to \$86,700 (see "Your earnings," at right). On its own, this doesn't sound all that impressive. But compared with the cost of living, it makes IT look like a good place to be. The average inflation rate for 2006 was only 3.2%, according to Inflationdata.com.

Yet respondents aren't particularly happy with their pay packages. When asked to rank how satisfied they are with 18 job criteria, overall compensation and base salary fared poorly compared with how important they are. Overall compensation is tops in importance, with base salary at No. 2, yet those job criteria rank 11 and 12, respectively, in the satisfaction listing (see "Frustrated with the paycheck," page 39).

Similarly, respondents report dissatisfaction with annual raises. That job factor is No. 7 in importance but ranks No. 15 in satisfaction. Bonuses and stock options also are the source of disappointment, ranked No. 16 and 18 in satisfaction. However, those job factors aren't nearly as important to them. Bonuses come in at No. 16 and stock/stock options at the rock-bottom No. 18 in importance.

That bonuses and stock options rank so low in importance is odd given the hefty year-over-year average increases reported — 11.6% for bonuses, to an average of \$7,700, and 21.1%, to \$2,300, for stock/stock options. One explanation for this could be that respondents see these as standard human resources fare, awarded when a company does well but not as a perk for doing a great job as a network professional per say. This perception could lead to a lower importance rating compared with job factors of a more personal nature.

When adding base pay with bonuses and such compensation as stock options, respondents are pulling in a total of \$97,600 on average this year, or a 6% rise over 2006.

Salary issues

As could be expected, people in the upper-most IT echelon — CIOs and those with senior vice president or vice president titles — received the biggest pay hikes. Those totaled 6% on average, to a base salary of \$128,300. Likewise, those at the lowest level — LAN managers, network architects, network operators or techni-

Network professionals generally earned annual salary raises that bested the national 3.2% inflation rate by a percentage point or two — and received hardy bonuses, too, according to the 2007 Network World Salary Survey

Your earnings

GROUPING	DESCRIPTION	BASE SALARY 2007*	BASE SALARY % CHANGE**
TOTAL	All respondents	\$86,700	5.2%
NET EXECS/SENIOR MANAGEMENT		\$123,800	6.0%
	CIO	\$126,300	7.0%
	Sr. VP/VP MIS/IT/IS/DP	\$130,900	4.9%
MIDDLE MANAGEMENT		\$91,200	5.2%
	MIS/IT/IS/DP director	\$87,100	4.8%
	LAN, WAN or network director	\$93,500	5.3%
	Telecom manager	\$99,900	4.8%
	Internet, intranet, e-commerce manager	\$102,300	5.6%
STAFF		\$74,300	5.1%
	LAN, WAN or network manager	\$64,800	4.7%
	Network architect, designer, analyst or database administrator	\$86,600	5.0%
	Network operator, technician or other network operations staff	\$59,400	5.5%
	Data center manager/architect, storage manager/administrator	\$91,600	7.0%
	Trainer, help desk, tech support	\$47,900	2.1%
	Software or Web programmer/developer	\$80,100	4.8%

cians, help desk support staff and the like — netted the smallest raises, at 5.1%. Base salary for this group averaged \$74,300.

Staff-level dissatisfaction over salaries has been an issue for Jonathan Campbell, director of network services at FirstHealth of the Carolinas, a sprawling healthcare network in Pinehurst, N.C. Campbell reports having recently lost a couple of people from his network operations staff, at least in part due to pay issues. Finding new staff members wasn't easy. "The biggest problem is salary," he says.

The issue is twofold, Campbell says. "Companies that have extremely competent people are paying big bucks to keep them.

*ALL DOLLAR FIGURES ARE MEAN AVERAGES **PERCENT CHANGES REFLECT CHANGES FROM 2006 TO 2007 ***TOTAL COMPENSATION INCLUDES BASE PAY, BONUS, STOCK OPTIONS AND OTHER PAYMENT

sag over pay

2007 BONUSES	BONUS % CHANGE	TOTAL COMPENSATION***	TOTAL COMP. % CHANGE
\$7,700	11.6%	\$97,600	6.0%
\$25,500	13.3%	\$165,000	8.3%
\$23,300	12.6%	\$161,400	8.9%
\$28,400	15.0%	\$169,600	7.6%
\$8,100	11.0%	\$102,300	5.6%
\$8,100	15.7%	\$97,300	5.2%
\$7,700	10.0%	\$104,600	5.4%
\$11,200	4.7%	\$119,600	6.5%
\$7,800	11.4%	\$111,900	5.5%
\$3,700	8.8%	\$79,600	5.4%
\$2,100	5.0%	\$67,900	4.6%
\$6,200	8.8%	\$95,800	5.9%
\$1,400	-12.5%	\$62,400	5.2%
\$4,900	11.4%	\$100,000	8.0%
\$900	0.0%	\$49,200	2.3%
\$3,000	36.4%	\$83,800	5.4%

Frustrated with the paycheck

Importance and satisfaction ratings of 18 job criteria show that survey respondents aren't nearly as happy with their paychecks as they'd like.

JOB CRITERIA	IMPORTANCE RANK	SATISFACTION RANK
Overall compensation	1	11
Base salary	2	12
Benefits package	3	10

Go to www.nwdcfinder.com/1724 for the full importance and satisfaction ratings.



**"THERE IS A
WILLINGNESS TO
SACRIFICE**

**SOME POTENTIAL INCOME FOR
THE ABILITY TO DO WHAT I LIKE.
I WOULD SAY THAT'S PROBABLY
ABOUT 10 TO 20%."**

— DAVID LAMPERT,
network operations manager, Physio-Control

Other companies looking for new hires can't meet the salary demands to get these individuals to leave their current positions. So those companies will pay less to get a foreign [immigrant] worker with little experience but lots of degrees and certifications to fill the position, even though factors such as customer satisfaction may suffer," he explains.

Campbell suggests this may be leading to some of the dissatisfaction over pay that's bubbling up from the bottom. "I've talked to a number of foreign workers, and most complain about their compensation as compared to their American-born counterparts," he says.

Healthcare isn't the highest-paying industry, but it's not the lowest, either. The average annual increase for network professionals in healthcare was 5%, bringing base pay to \$88,300, the survey finds. Those working at media, hospitality, entertainment or recreation companies reported the biggest salary gains, of 7.4% on average. However, average base pay for those companies, at \$84,500, is still below the top-paying finance and high-tech sectors. Average salaries for those sectors are \$97,300 — a 5.1% increase from 2006 — and \$93,000 — 6.2% higher than last year.

On the opposite end of the pay spectrum, government workers and military personnel reported the lowest raises, at 4.1% on average. Still, with an average base pay of \$78,600, their salaries are slightly better than those of their peers in education. Respondents in education, the lowest-paid sector, reported average raises of 4.6%, bringing base pay to \$73,400. (For a look at how geography affects your salary, see "Base pay by region," page 41.)

Paycheck vs. other job criteria

The good news is, while a storm is brewing over base pay and total compensation, other factors are keeping a real downpour of job dissatisfaction at bay. Family friendliness, flexibility of work schedule and proximity to home are Nos. 11, 12 and 15 in importance, but respondents clearly still appreciate the warm fuzzies they get from them. In satisfaction, those criteria rise to the Nos. 1, 3 and 4 spots. Likewise, respondents are quite pleased with job security, ranked No. 4 in importance and No. 2 in satisfaction. This is a significant change from the post-bubble days, when job security was ranked more important than anything — even pay.

Even while they wish they were better compensated, most respondents report that they like where they're at with their jobs. When asked how satisfied they are with their current positions overall, nearly 42% of respondents said they were either very satisfied or extremely satisfied, and another 40% indicated that they're satisfied.

But a hierarchy does come into play. Middle managers are more satisfied than those in staff positions, and the

most senior managers are more satisfied than both middle managers and staff members. Indicative of the age-old class struggle, 61% of dissatisfied respondents hold staff positions. The most wanting of the lot are trainers, help desk personnel, technical support staff, software developers and Web programmers, the survey finds.

On top of salary issues, any number of other factors could explain why staff members generally are more dissatisfied overall with their jobs than higher-level network professionals. The concern over outsourcing lurks behind some of the dissatisfaction, for example. Nearly 17% of respondents reported being affected by the increased use of outsourcing at their places of work. Respondents who work in manufacturing, banking and high-tech industries most often reported increased use of outsourcing at their firms, as did respondents within the largest companies.

Concern over job replacement is certainly valid, as outsourcing proves an increasingly viable option for companies that need talented workers quickly and inexpensively, says David Lampert, net-

Hot IT skills

Windows administrators are in high demand, but plentiful. Experts in security, storage and networking are much wanted, too, but harder to find.

For the first time, we asked participants in our annual salary survey project to tell us about their hiring plans. Of the 1,100 respondents with hiring authority, about half, or 54%, have job openings. Respondents in the high-tech and healthcare sectors most frequently report being in hiring mode, while those in the transportation and at nonprofits least frequently.

Among those hiring, Windows administrators are in the biggest demand but also are expected to be the easiest to find. Also in high demand are network designers, architects and operations technicians (versed in Cisco networking, VoIP technology and network management, for example). Survey respondents say, however, these folks will be tough to find.

Here's a look at the hiring picture:

% WHO PLAN TO HIRE	JOB SKILLS WANTED	HIRING DIFFICULTY RATING*	% EXPECTING DIFFICULTY IN HIRING	% EXPECTING EASE IN HIRING
46%	Custom software programming/database programming	3.42	49%	21%
51%	Storage architect, data archiving/backup	3.46	50%	18%
51%	Windows administration	2.39	18%	57%
54%	Web applications development/database	3.08	38%	35%
58%	Security architect, security administrators, security response team	3.7	58%	12%
60%	Data center management/architect	3.38	46%	19%
60%	Open source/Linux administrators	3.25	42%	24%
71%	Network designer, architect, operations technicians	3.44	50%	20%
73%	Wireless LAN design, management	3.09	34%	29%

TOTAL NUMBER OF RESPONDENTS = 588 *MEAN, ON A 1-TO-5 SCALE FROM EASY TO TOUGH TO FIND **THOSE SELECTING 4 AND 5. ***THOSE SELECTING 1 AND 2
SOURCE: 2007 NETWORK WORLD SALARY SURVEY

work operations manager at Physio-Control, a Redmond, Wash., business unit of Medtronic, a \$12 billion global manufacturer of medical devices. Eastern Europe, in particular, has a goldmine of great outsourcing talent waiting to be tapped, he says.

Lampert manages five people, all of whom work for a Ukraine outsourcer. Things couldn't be better, he says. They are well educated, have extremely high levels of professionalism and an admirable work ethic, plus have mastered English, he says.

"Outsourcing has worked extremely well for us," Lampert says. Physio-Control makes the external defibrillators used by emergency medical services (EMS) and hospital teams, and also found in such public places as airports and schools. Using cell-phone data networks, the company moves data — EKGs — from the sophisticated defibrillators used by EMS teams to ER professionals and cardiologists in near real time so diagnosis begins while the cardiac patient is en route to the hospital. Lampert manages the data-center operations that facilitate the communication between the devices and the caregivers, and relies on his outsourced employees to handle a wide range of tasks, from software development to network design and operations and day-to-day infrastructure management.

Job opportunities

Certainly, the network job market is vibrant, and new job opportunities abound, according to the survey. But, as Lampert suggests, finding local talent isn't always easy.

Of the 1,100 survey respondents with hiring authority, slightly more than half are on the prowl for new workers, with the hottest job markets in the South Atlantic, Northern Midwest and Pacific regions. The hiring news is especially good for those with network skills, as 71% of respondents are looking to hire designers, architects or operations technicians with Cisco, VoIP and network-management know-how. But hot skills also fall across a number of other categories, with data-center management, security operations, wireless LAN (WLAN) design and Windows administration among them.

Interestingly, only Windows administrators are expected to be easy to find, the survey finds. Those who are well versed in WLAN design and management and Web application development will be moderately easy to find, while security professionals seem to be the most elusive (see "Hot IT skills," page 40).

With employers on the hunt and pay dissatisfaction creeping in, fewer people in general are feeling loyal to their employers, the survey finds. A slightly larger number of respondents — 54% — either are seeking a new position or would follow up upon learning about job opportunities than those who aren't really interested in leaving their jobs, at 46% (See "Loyalty ratings," at top right). If they are looking, respondents most often cite more challenging work and advancement opportunities and — no surprise — better base salary plus total compensation and benefits. ■

Loyalty ratings

Fewer people express absolute loyalty to their jobs this year, but fewer are aggressively looking for new work, too. Still, over the past five years, network professionals have been fairly consistent with their approach to new job opportunities, with people absolutely looking for new jobs and those with steadfast commitments to their current employers in the minority.

	2003	2004	2005	2006	2007
Seekers (on the prowl)	12%	13%	13%	15%	13%
Explorers (keeping their eyes open)	40%	39%	39%	40%	41%
Approachables (not looking, but would respond to a personal inquiry)	32%	32%	32%	29%	33%
Loyalists (committed to current employer)	16%	16%	16%	16%	13%

The unsatisfied worker

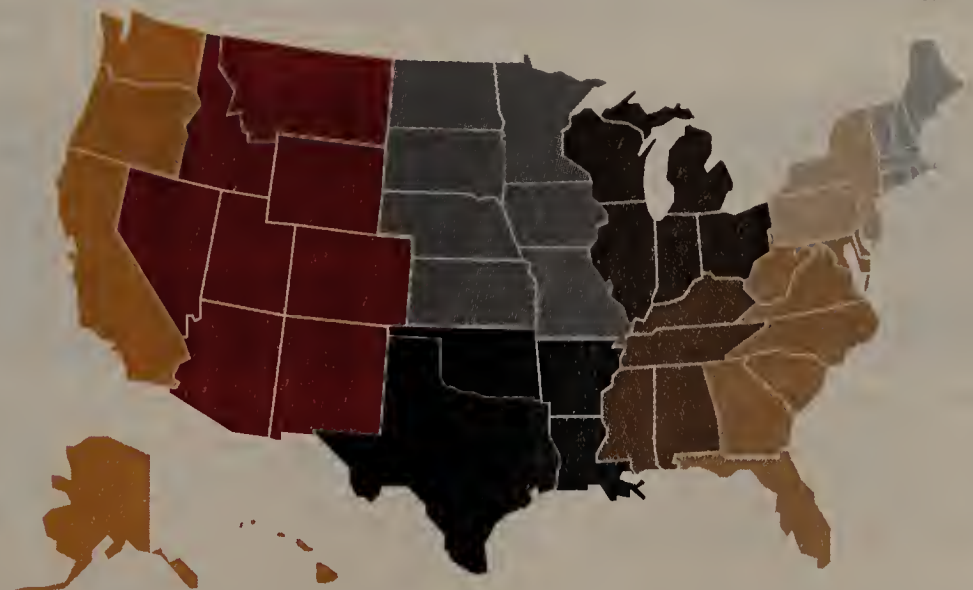
The 2007 Network World Salary Survey finds these characteristics are typical of network professionals who are more dissatisfied with their jobs than not:

- Has been in current position six years or longer and promoted only once or not at all.
- Makes less than \$60,000 a year in a staff-level position, particularly working on software and Web development, training or does help desk or tech support.
- Has no direct reports.
- Is not expecting to receive a bonus in 2007.
- Works at a company with more than 1,000 employees, often in manufacturing.
- Lives in a Middle Atlantic state.
- Has earned a bachelor's degree vs. holding no college degree.

Base pay by region

	2007 base pay*	% change from '06
New England (Conn., Maine, Mass., N.H., R.I., Vt.)	\$87,300	5.8%
Middle Atlantic (N.Y., Pa., N.J.)	\$93,800	4.8%
Northern Midwest (Ill., Ind., Ohio, Mich., Wis.)	\$82,000	4.9%
Northwest (Iowa, Minn., N.D., S.D., Mo., Kan., Neb.)	\$73,800	4.7%
South Atlantic (Fla., Ga., Md., Del., N.C., S.C., Va., W.Va.)	\$88,100	6.0%
Southern Midwest (Ala., Ky., Miss., Tenn.)	\$76,200	5.0%
Southwest (Ark., Okla., La., Texas)	\$84,500	5.8%
West (Ariz., Colo., Idaho, Mont., N.M., Nev., Utah, Wyo.)	\$89,400	5.9%
Pacific (Alaska, Calif., Hawaii, Ore., Wash.)	\$94,900	4.9%

SOURCE: 2007 NETWORK WORLD SALARY SURVEY
* MEAN AVERAGE



Five tips for how to get more out of your job

Network executives share their success factors

1. Arm yourself with salary statistics when you meet for your annual review. Patti Henderson, IT director at Boise, Idaho, law firm Givens Pursley, got an above-average 8% raise this year by using statistics to show her superiors how comparatively inferior her salary was. The statistics came from IT sources, such as the 2006 Network World Salary Survey, as well as from the American Legal Association. "I've been following salary surveys for the last three years . . . and I requested a substantial raise on the idea that here are all these surveys [showing that I'm underpaid for the work I do]," she says.

2. Increase your chances of getting budget approvals by knowing when the company's financials look strong. IT Manager Pam Davey says this tactic has worked well for her at Buyers Products, a Cleveland company that makes products for the mobile equipment industry. While not required to sub-

mit a formal budget, Davey does keep the company controller regularly up-to-date on her long-term spending requirements. But she also tracks the bottom line so "I know when the time is right to ask for more money," she says.

3. If your company has an education benefit, take advantage of it. Going back to school, whether for a bachelor's degree, master's degree or a doctorate, not only benefits you but also sets a great example for peers and direct reports, says Jonathan Campbell, director of network services at FirstHealth of the Carolinas, an expansive healthcare network based in Pinehurst, N.C. Campbell is taking advantage of FirstHealth's education benefit as he works on his master's, he says.

4. Grab every opportunity to cross-train that you can reasonably handle. Even as the top-level network executive, FirstHealth's Campbell knows there's always more to learn about networking. With that in mind, he says he's excited by talk of a new Cisco certification program for network architects. "There a lot of [Cisco Certified Internetworking Experts], and I'm one of them, who spend a lot of configuration time but don't really understand the architecture piece that everything relates to a whole as far as the unified system itself — voice, data and integrating mobile devices, and doing the traffic engineering. With this new certification, we'll finally be able to address that," Campbell says.

David Lampert, network operations manager at Physio-Control, a Redmond, Wash., business unit of medical device maker Medtronic, agrees. The best network executives are those who take a multidisciplinary approach, he says. After all, he adds, "the No. 1 rule of networking is to know your applications." For example, Lampert calls networking his strong suit, but says he can hold his own in systems, applications and other IT disciplines.

5. If you dream of promotions and big salaries, identify a long-term career goal and stick to it. That doesn't mean you can't make adjustments, but don't get derailed by getting too steeped in one type of technology or pulled too deeply into the business side — you need a good mix of technology and business, Physio-Control's Lampert says. As you take each step down your career path, you've got to stop yourself and ask, "Am I fundamentally on my way to achieving that goal?" he says.

— BETH SCHULTZ



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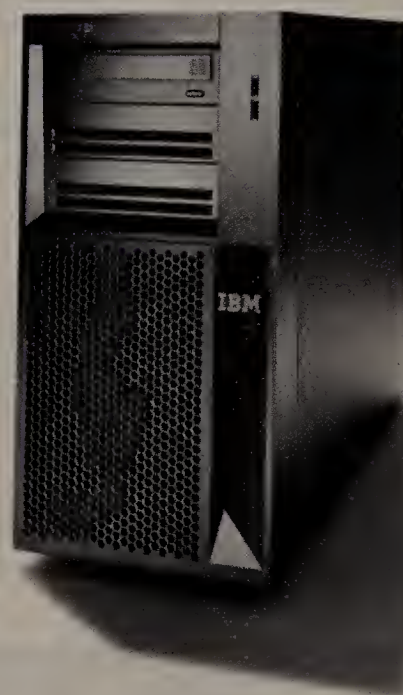
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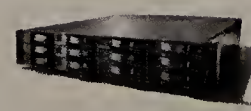
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Learning from experience

BY ANN BEDNARZ

It's not hard to find companies that are jumping into WAN optimization. Every month there are a handful of press releases announcing new customers that have signed on to purchase different vendors' gear. What's more rare is finding an old pro: Liz Claiborne.

The apparel company has used traffic-shaping gear from Packeteer for six years. Joe Yankauskas, IT director with Liz Claiborne, says the company deployed Packeteer's PacketShaper appliances to prioritize and deliver its business-critical applications, including its ERP and retail management applications.

Six years ago, HTTP, CIFS and MAPI traffic was consuming too much bandwidth, imposing per-

formance penalties on essential network traffic, he says. "The original impetus was to make sure that our mission-critical business applications were delivered to the sites and didn't have conflict with non-mission-critical applications like e-mail and regular HTTP traffic."

Prioritizing voice traffic is another key use of traffic-shapers. Liz Claiborne started deploying VoIP technology three years ago and today it has about 5,000 VoIP phones in use. "Voice requires the highest priority traffic on the network because you can't retransmit voice packets. If you drop a packet, you get the jitter and scratchiness on the phone," he says.

Liz Claiborne has deployed the PacketShaper appliances at its corporate data center and roughly 40 satellite offices, which are networked via a variety of T-1 and DS-3 circuits. PacketShapers have "become staple as we roll out new sites, new locations," Yankauskas says.

But while the company's deployment dates back six years, that doesn't mean it's not dynamic.

One thing that is new is Liz Claiborne's in-progress rollout of Packeteer's Report Center software, which will enable the IT department to centrally monitor traffic and perform trend analyses. The software creates a dashboard that consolidates to make it easier for administra-

tors to spot throughput issues and track network behavior, for example.

"They can see how each circuit is performing and determine whether or not they have to fine-tune any of the parameters and shaping to give more availability to a particular application," Yankauskas says.

Without Report Center, reviewing metrics requires pulling data from each device. "You have to attach to each PacketShaper at each site and pull down the reports," he says.

Yankauskas is hopeful the Report Center software, once fully operational, will help Liz Claiborne more accurately evaluate and predict bandwidth requirements. With Report Center, the IT team will be able to "do careful analysis to determine exactly when we need an upgrade and when we don't need an upgrade," he says. ■

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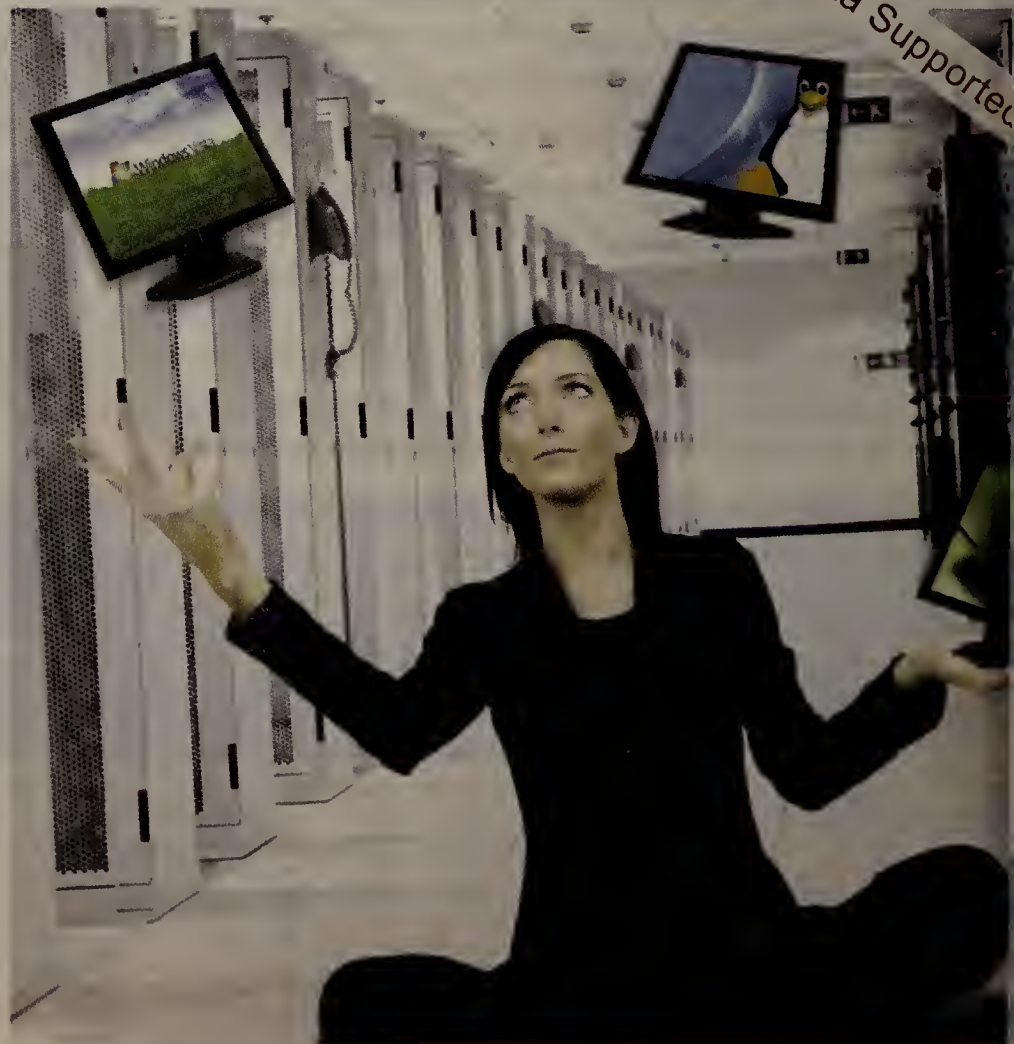
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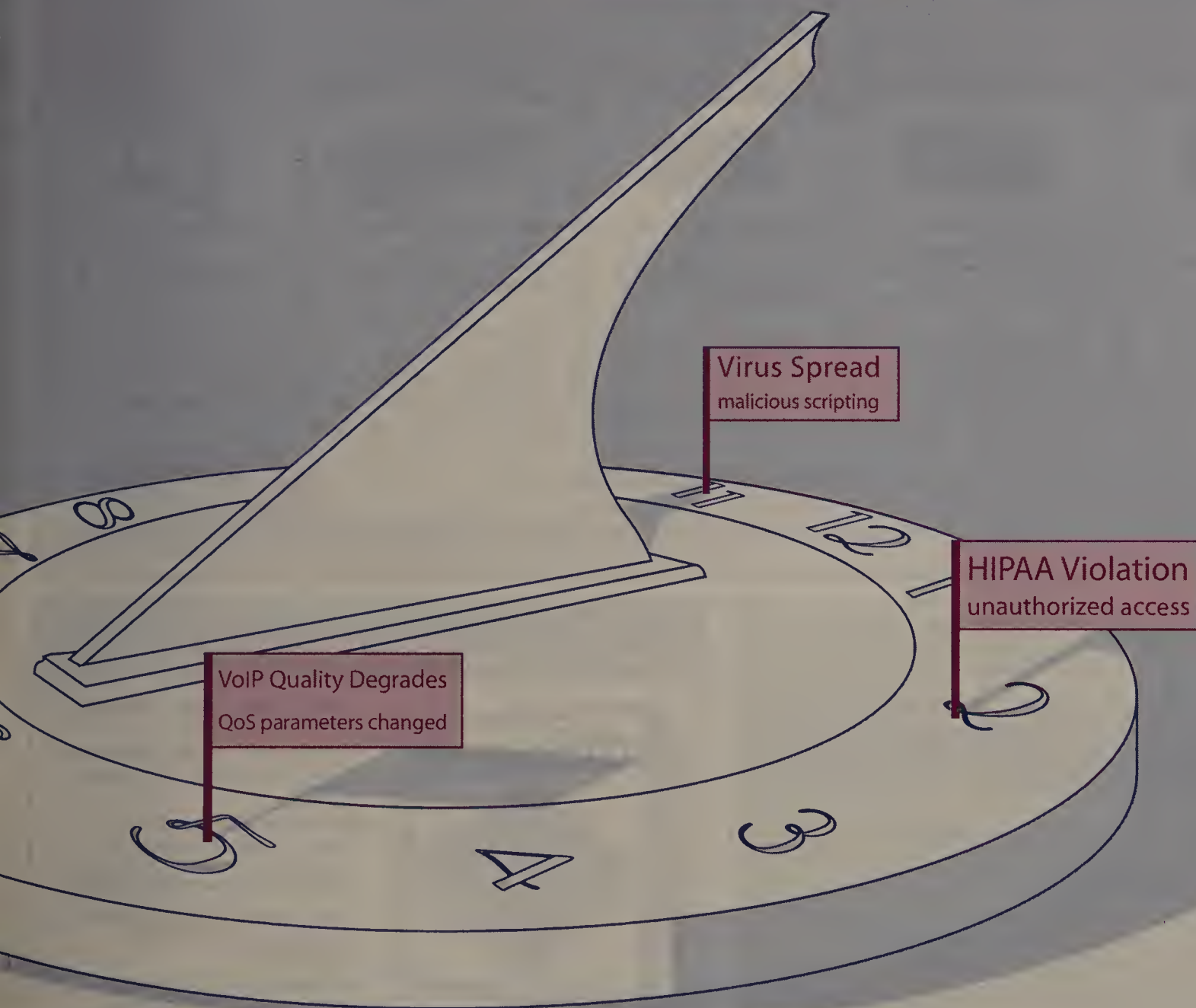


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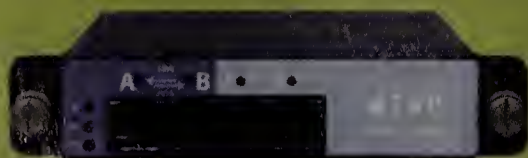
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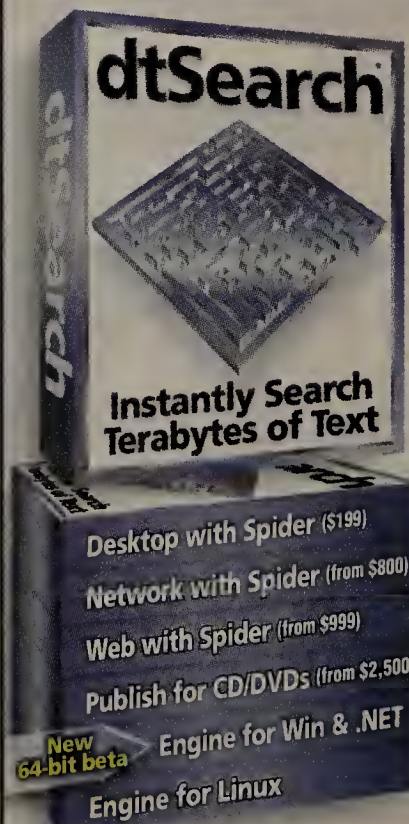
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Gartner

continued from page 19

moving into the corporate world. Kids use blogs, wikis and social-networking tools to interact with each other, and they expect the same in the workplace.

"Your users will do it behind your back, bring this stuff in and make it part of their processes, and eventually you'll have to deal with it anyway," Phifer said.

Just as customers and sellers rate each other on eBay, young people use Web sites to rate the physical attributes of peers, pop culture, teachers and products.

"In the enterprise, they're going to rate you, they'll rate their bosses, they'll rate peers. They're going to rate customers," Austin said.

Gartner projects a 42% compound annual growth rate in the Web 2.0 market through 2011. The analyst firm classifies the market as "early emerging." By way of comparison, e-mail and ERP are classified as somewhere between maturity and decline, while Web conferencing is high growth.

Analysts urged IT executives to nurture this growth, perhaps with MySpace-like Web pages where employees can describe themselves. Building on the collaborative aspects of Web 2.0 can increase innovation.

Take Procter & Gamble. P&G's research and development used to take place entirely within the Cincinnati company. Using collaborative Web sites, such as InnoCentive, the company over the past few years has tapped the brain power of moonlighters, students, engineers and housewives to develop ideas for new products, Austin said. Today, 40% of P&G's new products are based on external research and development, he said.

A business called Threadless, which makes T-shirts, lets people submit design ideas and vote on them. Threadless picks the winners each week and gives them \$2,000 and starts printing the shirts. The Chicago company has thus externalized product design, market testing and has a built-in market of people who like the shirts, Austin said.

In both cases, IT acted as an enabler.

You can use Web 2.0 to speed up problem resolution, raise employee skill levels, make e-mail more effective, and improve the sharing and reuse of information and knowledge, he said.

Virtual worlds, such as Second Life, aren't really mature yet, because they are hard to navigate, Austin said. But there are plenty of options today in addition to blogs and wikis, such as rich profiles for employees, shared

bookmarks and tagging, which lets both the creators and consumers of information assign labels to that information.

One conundrum businesses face is deciding where Web 2.0 is appropriate. If you're trying to ascertain facts or perform deep analysis, a strict authority structure is probably best, said Anthony Bradley, a Gartner research director. If you're looking to promote innovation, diversity of ideas or to ascertain people's perceptions, a more collaborative structure is called for. "If there's no strong community aspect to it, it's not a good fit for Web 2.0," he said.

Typically, anonymity should not be allowed because it will be abused, analysts said. But placing too many restrictions will stifle innovation, so be prepared to "repair some vandalism," as one analyst put it.

Budgeting for these new technologies may be a challenge, but it shouldn't be a deal-breaker, Phifer said.

Mashup technology might cost a few hundred thousand dollars, while blogging and wiki tools could cost a few thousand. But that's not as expensive as acquiring and managing a traditional software infrastructure. "You're not looking at humongous investments," Phifer said. ■

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USPS735-730

Microsoft

continued from page 13

said. "A lot of this stuff you have not seen yet."

After a brief tour through the history of SQL Server, Kummert said the community technology preview (CTP) program launched with SQL Server 2008 has allowed users to have a huge effect on product development. He said the June CTP would be followed by two more and that the final release of SQL Server 2008 is still on target for the second quarter of 2008, even though it will be featured in a "launch event" in February with Windows Server 2008 and Visual Studio 2008.

Kummert wrapped his messages about positioning SQL Server 2008 around data warehousing and his observation that corporations are experiencing a data explosion driven by new data types, including multimedia. That development is forcing the database to push beyond storing just relational data and to develop new management, productivity and developer tools, he said.

"What's driving this is the evolution of data types," Kummert said. "It includes images, stills, video, data from sensors such as RFID, the Web and digitization of existing assets. There is a whole new set of data types that you want to use in your business process applications. There is compliance, policies around retention which brings life-cycle management challenges with it."

With that in mind, he said SQL Server 2008 would stand on four foundational elements: a solid data platform in terms of reliability, scale and security; operational cost reductions

through such mechanisms as self-maintaining systems, support for new data types, and universal quick access to data.

Users running SQL Server 2005 are tracking those developments.

"I am here to look at the BI track," said Quentin Fleurat, manager of information technology programming for Bresnan Communications, a broadband telecommunications provider in Purchase, N.Y. He also said he is tracking the Filestream feature in SQL Server 2008 that lets users store a pointer in a database used to retrieve unstructured data from a file server, a much faster and cheaper alternative than storing and retrieving that data from a database. Bresnan has a home-grown application to perform that task.

"We retain our customer statements for two years and will eventually have a file system with 17 to 19 terabytes of data," he said.

But regardless of need, he says an SQL Server 2008 rollout is at least a year away.

"We always wait for the first service pack and then we will set up a test environment and start tracking issues others companies are having," he said.

Kummert then launched into a series of demos highlighting features around management, the use of new data types, productivity gains for developers, and expansion of the database's user population.

He showed off the Declarative Management Framework, a new policy-based management framework that ensures mandated system configurations, such as preventing the use of certain database schemas, and support for IntelliSense features to simplify administration. ■

DATA CENTERS

Resources to help users better support data centers

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53% Troubleshooting software problems

50% Maintaining disparate applications

48% Issuing software patches

48% Ensuring adequate performance and availability

41% Safeguarding the data center from physical disaster

40% Scaling the environment up and down for demand peaks and valleys

39% Having enough physical space in the data center

34% Adequately cooling equipment

30% Understanding the interdependence of data center equipment

28% Dealing with power outages

23% Troubleshooting hardware problems

23% Keeping track of the equipment in the data center

Today's challenges of supporting a data center include virtual server sprawl, ongoing migration to blade servers, mounting cooling demands, a never ending need for more power, the rising costs of energy and more.

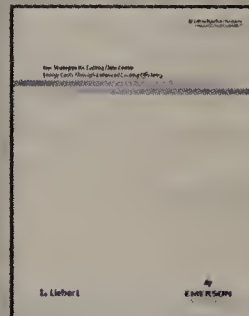
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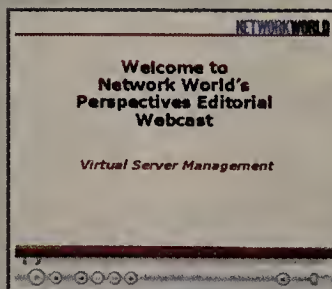
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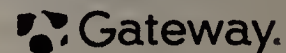
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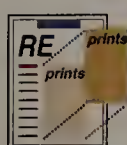
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BACKSPIN

Mark Gibbs

Dealing With Hippos

So you're thrashing out the final details of, say, how to implement the next phase of your CMS or ERP system. You've gone from the big picture ("We need a system to ...") and after countless meetings finally got down to the details ("We need these fields on this form and this link will point to do ...").

You're feeling good. You've finessed the departmental politics and got all of the stakeholders in broad agreement. You've lined up the budget, the resources, hell, you can see the goal posts in sight. You can make this happen! You are an IT god! And then ...

And then in comes the Hippo. The Hippo could be your boss, the CIO, the vice president of sales, the CTO or even the CEO. You might be a big fish in the organizational pond, but the Hippo? Well, he's a Hippo. A much bigger beast than you.

The Hippo's pitch usually goes something like, "Hey, that's cool but what about ...?" What follows is often bizarre, irrelevant, capricious, vague, foolish, simplistic, ridiculous, aggravating or pointless. Or all those things at the same time.

Whatever it is, the Hippo is on a different page. He may have the right book and sometimes even the right chapter, but he has chosen a page you have never seen let alone read.

"What we need is ..." says the Hippo, and the result — if you're lucky — is a new field or a new green button on a user interface that has bugged all to do with what you need to achieve. If you're unlucky, he's going to invent a whole new business process that no one needs.

The Hippo's reasoning for whatever he thinks to be crucial is usually

"The Hippo's reasoning for whatever he thinks to be crucial is usually vague."

vague. For something like a green button he may mutter something about an article he read years ago in the *Reader's Digest* that said that humans recognize objects in green faster than other colors because when we were all dragging our knuckles on the ground it aided our survival. And he's not kidding. He really believes this makes sense.

Your problem is how to make the Hippo happy, because an unhappy Hippo at best means you're going to get into a knock down, drag 'em out fight (a battle of wits with an unarmed man is never much fun), and at worst could leave you concerned about your job.

While I have had my fair share of run-ins with Hippos, I hadn't heard them called such until I had lunch last week with my old friend Jim Sterne. Jim is president of the Web Analytics Association (he asked me to tell you his next conference is forthcoming — visit www.nwdocfinder.com/1739) and it turns out in the rarified atmosphere of e-metrics the concept of organizational Hippos is commonplace.

The reason this group has identified the Hippo is that they have an answer for him:

Measure. Whatever it is — a green button, a field on a form, a new business process — track it and see, in detail, how it performs. When you get hard evidence that something doesn't work then you have grounds for getting rid of it.

Until you have evidence, you and the Hippo will just butt heads and you know whose is bigger. It's a case of speak softly and carry a big measuring stick.

There are not a lot of hippos where Gibbs lives in Ventura, Calif. But if you have your own Hippo horror stories, please share at backspin@gibbs.com.



Paul McNamara

NETBUZZ

News, Insights, oddities

Ameritrade had plenty of red flags

E-mails sent my way last week indicate that Ameritrade received explicit and repeated warnings from an IT security expert starting Jan. 9, 2006, that its customer data had apparently been compromised, placing the start of this latest high-profile breach much earlier than previously reported — and likely pushing it into 2005.

Nevertheless, the company insisted for the next 20 months that a flood of stock-related

spam being received by numerous clients was not indicative of a more serious problem.

They couldn't have been more wrong.

Following that January 2006 e-mail, subsequent warnings from multiple sources — including a column in May by my *Network World* colleague Mark Gibbs — also failed to prompt the company to alert its clients. Only on Sept. 14 did Ameritrade publicly acknowledge that "unauthorized code" on its systems had "allowed certain information stored in one of our databases, including e-mail addresses, to be retrieved by an external source."

More than 6 million customer accounts were exposed, although Ameritrade contends there has been no known identity fraud associated with the breach.

"I warned Ameritrade of a security breach in January of 2006, which means that it likely occurred in mid- to late-2005," says Joshua Fritsch, who sent the Jan. 9, 2006, e-mail and provided copies of his subsequent exchange with Ameritrade. Fritsch has 15 years of experience in networking, including "security design and management for a global financial firm."

Ameritrade stubbornly stands by its decision to hold off on an earlier public notification, saying the alien code was discovered only recently.

"We didn't know how the information was getting out," says company spokeswoman Kim Hillyer. "We didn't know the scope of the issue."

Asked if prudence might have suggested an earlier alert — given the number of sources and the expertise of those warning the company, coupled with all the internal uncertainty — Hillyer fell back on her talking points and insisted there was nothing more they could have done.

The company is already being sued over the spam deluge, and can certainly expect to hear from more lawyers.

While Fritsch does not have a copy of the first e-mail he sent to Ameritrade — it was submitted via a Web form and not copied back to him — he told me that it went like this:

"I created ameritrade@unixgeeks.org just for use with your company, and it was never distributed anywhere else. Thus, your database has been compromised either by a hacker, or one of your employees selling the data."

Here's what he got back from Ameritrade, dated Jan. 9, 2006:

"Mr. Fritsch,

The Spam e-mail you are receiving is not a result of Ameritrade sharing or selling any contact information, nor do we believe any information has been compromised. The cornerstone of our Privacy Statement is the commitment to keep our clients personal information confidential. ...

Several Spam methods do not depend on using purchased or intercepted lists of existing or valid e-mail accounts. Spammers also use known "brute forcing" or dictionary techniques. Brute forcing e-mails basically starts with something like a@doeinvestor.net, aa@doeinvestor.net, aaa@doeinvestor.net, aab@doeinvestor.net,

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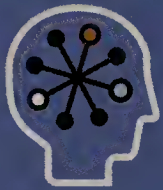
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